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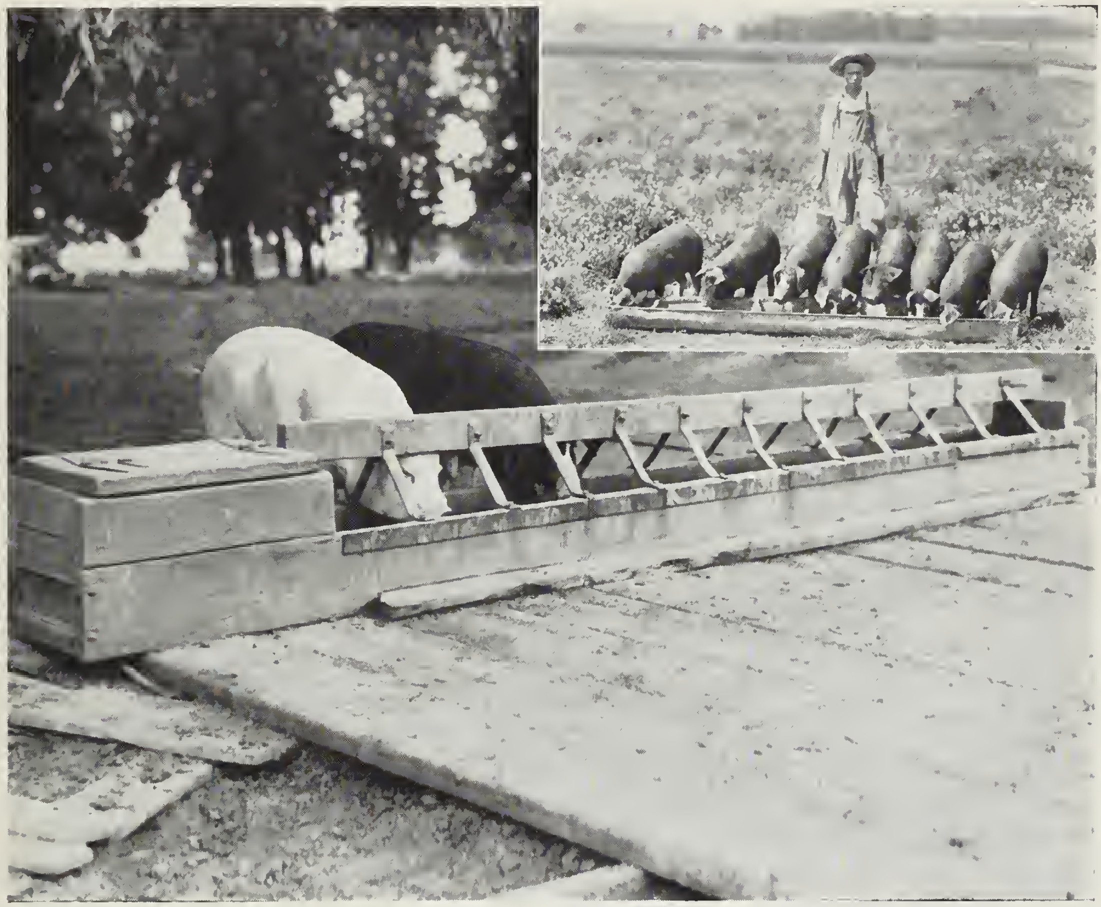
FARM BUSINESS REPORT . . . 1943



Labor-saving methods and devices lead to increased wartime production. This homemade waterer, which may be attached to a pressure system or to a tank wagon, is float controlled, requires little attention and provides fresh water at all times. Moreover, it is mudhole proof. Upper right—the hard way.

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FARMING-TYPE AREA TWO

Northwestern Mixed Livestock Area

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

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Annual Farm Business Report

ON TWO HUNDRED THIRTY-FIVE FARMS IN FARMING-TYPE AREA 2, 1943

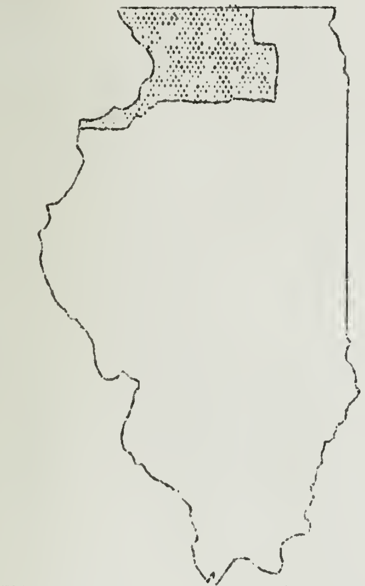
By J. B. Cunningham, E. L. Sauer, and F. N. Searls[1]

Production. Included in the group of 235 accounting farmers in Farming-Type Area 2, were 173 farmers who operated the same farms in 1943 as in 1942. These 173 cooperators attempted to step-up production in 1943 over that of 1942 by increasing numbers of pigs and numbers of hens.

TABLE 1.--PRODUCTION CHANGES ON THE SAME 173 FARMS, 1942 AND 1943, AREA 2

Item (Average per farm)	1942	1943	Change Actual	Change Per cent
Acres	198	198	0	0
Acres of grain crops	105	105	0	0
Number of cows milked	9	9	0	0
Number of pigs weaned	115	131	16	14
Number of hens	126	131	5	4
Total months of labor	20.9	21.3	.4	1.9
Value of machinery (beginning of year)	$2 168	$2 484	$316	14.6
Tons of grain produced	152	150	-2	-1.3
Value of production of livestock and livestock products[a] - total	$8 384	$7 791	-593	-7.1
Cattle	2 721	2 271	-450	-16.5
Dairy sales	1 204	1 235	31	2.6
Hogs	3 878	3 686	-192	-5.0
Sheep	103	97	-6	-5.9
Poultry and eggs	478	502	24	5.0

a/ 1943 values adjusted to 1942 price level.



▨ Farming-Type Area 2
Mixed Livestock

Slightly more labor was used in 1943 than in 1942 and, as usual, about 76 percent of the labor was operator's and family labor. The cooperators also used more machinery and equipment but the increase was in livestock equipment rather than in heavy machinery.

Total tons of grain produced per farm decreased from 152 in 1942 to 150 in 1943 because of decreased yields per acre for corn and oats. Livestock production for 1943, as measured by receipts and net increases adjusted to 1942 prices, showed decreases for all classes except poultry and eggs and dairy products, with the major money decrease in cattle.

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[1] J. A. Snyder supervised the closing of the farm accounts and the preparation of the tables used in this report. The farm advisers who supervised the project, cooperating county farm bureaus, and number of records by counties follow: D. G. McAllister (W. G. Mummert since March 1, 1944), DeKalb, 86; W. R. Taylor, Rock Island, 34; V. J. Banter, Stevenson, 30; C. E. Yale, Lee, 22; M. P. Roske, Carroll, 20; D. E. Warren, Ogle, 20; H. E. Kearnaghan, Jo Daviess, 18; H. R. Brunnemeyer, Winnebago, 14; F. H. Shuman, Whiteside, 11.

TABLE 2.--INVENTORY CHANGES, CASH INCOME, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 2, 1940-1943

Item	Your farm	Average of all farms in area			
		1943	1942*	1941*	1940*
Number of farms	--	235	484	516	456
Acres per farm		196	206	208	212
Inventory Changes					
Land improvements	$	$ 23	$ 22	$) 95	$) 74
Farm buildings		71	22	)	)
Horses		-22	-13	-24	-34
Productive livestock		-179	1 442	1 067	552
Feed, grain, and seeds		916	739	882	112
Machinery and equipment		45	168	210	63
Automobile (farm share)		-17	-21	44	4
Total	$	$ 837	$ 2 359	$ 2 274	$ 771
Cash Receipts					
Land improvements	$	$ 1	$ 1	$) 9	$) 13
Farm buildings		25	5	)	)
Horses		33	29	25	29
Productive livestock: Cattle		5 671	4 167	3 493	3 464
Dairy sales		1 450	1 424	1 202	822
Hog		3 950	3 948	2 377	1 459
Sheep		189	214	216	195
Poultry		192	154	124	93
Egg sales		439	363	255	171
Total productive livestock	( )	(11 891)	(10 270)	(7 667)	(6 204)
Feed, grain, and seeds		1 797	1 212	901	927
Machinery and equipment		162	188	214	199
Automobile (farm share)		20	19	60	39
AAA receipts		416	326	391	399
Labor off farm		24	27	31	38
Miscellaneous		2	8	12	9
Total	$	$14 371	$12 085	$ 9 310	$ 7 857
Cash Expenses					
Land improvements	$	$ 201	$ 182	$) 476	$) 390
Farm buildings		450	387	)	)
Horses		24	30	21	22
Productive livestock: Cattle		2 851	2 388	1 815	1 938
Hogs		234	215	123	96
Sheep		114	92	130	107
Poultry		67	50	39	31
Total productive livestock		(3 266)	(2 745)	(2 107)	(2 172)
Feed and grain purchases		1 790	1 620	1 117	827
Crop and sealing expense		283	221	163	180
Machinery and equipment		1 169	1 223	1 059	798
Automobile (farm share)		162	149	222	146
Livestock expense		110	108	78	63
Hired labor		526	549	417	367
Taxes		279	280	281	277
Miscellaneous		39	44	39	35
Total	$	$ 8 299	$ 7 538	$ 5 980	$ 5 277
Summary					
Total inventory change	$	$ 837	$ 2 359	$ 2 274	$ 771
Cash balance		6 072	4 547	3 330	2 580
Farm products used in household		376	330	276	247
Receipts less expenses	$	$ 7 285	$ 7 236	$ 5 880	$ 3 598

*Includes Farm Bureau Farm Management Service records.

TABLE 3.--INVESTMENTS AND EARNINGS
Accounting Farms in Farming-Type Area 2, 1940-1943

Item	Your farm	Average of all farms in area			
		1943	1942*	1941*	1940*
Capital Investments					
Land- - - - - - - - - - - - - - -	$	$18 118	$18 418	$18 461	$19 572
Land improvements - - - - - - -		724	743	5 939	5 829
Farm buildings- - - - - - - - -		5 064	5 231		
Horses- - - - - - - - - - - - - -		226	251	288	334
Productive livestock: Cattle- -		4 197	3 354	3 091	2 847
Hogs- - -		1 812	1 274	781	721
Sheep - -		103	138	162	150
Poultry -		156	137	107	100
Total productive livestock- - -	( )	(6 268)	(4 903)	(4 141)	(3 818)
Feed, grain, and seeds- - - - -		3 679	3 300	2 583	2 738
Machinery and equipment - - - -		2 375	2 276	2 103	2 099
Automobile (farm share) - - - -		305	310	209	185
Total - - - - - - - - - - - - - -	$	$36 759	$35 432	$33 724	$34 575
Earnings					
Receipts less expenses- - - - -	$	$ 7 285	$ 7 236	$ 5 880	$ 3 598
Family labor- - - - - - - - - - -		440	276	195	176
Returns for labor, capital, mgt.	$	$ 6 845	$ 6 960	$ 5 685	$ 3 422
Operator's labor- - - - - - - -		1 157	798	615	560
Net earnings per farm - - - -	$	$ 5 688	$ 6 162	$ 5 070	$ 2 862
Net Earnings per Acre - - - - - -		29.04	29.86	24.35	13.51
Rate Earned on Investment - - - -	%	15.5%	17.4%	15.0%	8.3%
Interest on investment- - - - -	$	$ 1 838	$ 1 772	$ 1 686	$ 1 789
Labor and Management Earnings - -		5 007	5 188	3 999	1 693

*Includes Farm Bureau Farm Management Service records.

Net earnings. The net earnings per farm on an inventory basis were lower in 1943 than in 1942; the average was $5,688 in 1943 compared with $6,162 in 1942. This comparison, as well as other comparisons between years should consider the fact that Farm Bureau Farm Management Service records were not included in the 1943 averages and the fact that the farms averaged 10 acres larger in 1943 than in 1942. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. The average net earnings per acre were $29.04 in 1943, $29.86 in 1942, $24.35 in 1941, and $13.51 in 1940.

Inventory changes. The year 1943 was the eleventh consecutive year in which inventories increased. The largest increase during the past four years was $2,359 in 1942, and the smallest was $771 in 1940 (Table 2). In 1943 the largest money increases were for feed, grain, and seeds. The average amounts of grain on hand in Area 2 at the two inventory periods were:

Crop	Beginning of year (bushels)	End of year (bushels)
Corn	2 998	3 076
Oats	991	863
Wheat	16	14
Soybeans	115	34

Cash receipts and cash expenses. In 1943 cash receipts exceeded cash expenses by $6,072, the largest margin for any year during the past four. The cash balance--the difference between cash receipts and expenses--is the amount of money which was available for family living expenses, interest, debt payments, and savings.

TABLE 4.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 2, 1943

Item	Your farm	Standards for your farm	Average of 235 farms
Rate earned on investment- - - - - - - -	______%	15.5%	15.5%
Acres in farm- - - - - - - - - - - - - - -	______	______ e/	196
Acres in crops - - - - - - - - - - - - - -	______	______	137
Gross earnings per acre- - - - - - - - -	$______	$______ a/	$ 50.56
Gross expenses per acre- - - - - - - - -			21.52
Investments			
Value of land per acre - - - - - - - - -	$______	$ 92	$ 92
Value of improved land per acre- - - -	______	______ a/	99
Value of buildings per acre- - - - - -	______	______ e/	26
Total investment per acre- - - - - - -		188	188
Land Use			
Percent of land area tillable- - - - -	______	______ a/	83.8
Percent of tillable land in:			
Corn - - - - - - - - - - - - - - - - - -	______	______	38.9
Oats - - - - - - - - - - - - - - - - - -	______	______	21.2
Wheat- - - - - - - - - - - - - - - - - -	______	______	.7
Soybeans - - - - - - - - - - - - - - - -	______	______	4.4
Other crops- - - - - - - - - - - - - - -	______	______	4.8
Legume and pasture - - - - - - - - - -	______	______	17.0
Nonlegume hay and pasture- - - - - -			13.0
Crop Yields			
Corn, bu.- - - - - - - - - - - - - - - - -	______	______ b/	70.0
Oats, bu.- - - - - - - - - - - - - - - - -	______	______	44.1
Wheat, bu. - - - - - - - - - - - - - - - -	______	20.9	20.9
Soybeans, bu.- - - - - - - - - - - - - - -		b/	22.1
Livestock Factors			
Value of feed fed to prod. l.s.- - - -	$______	$6 410	$6 410
Feed fed per acre to prod. l.s.- - - -	______	______ c/	32.72
Returns per $100 worth of feed fed - -	______	______	136
Poultry returns per hen- - - - - - - -	______	5.22	5.22
Number of litters farrowed - - - - - -	______	______ c/	21.2
Number of pigs weaned per litter - - -	______	6.1	6.1
Returns per litter farrowed- - - - - -	$______	$______ c/	186
Average number of cows milked- - - - -	______	______	9.0
Dairy returns per cow milked - - - - -	$	$	173
Labor Factors			
Labor cost per crop acre - - - - - - -	$______	$______ d/	$ 15.33
Labor units on crops - - - - - - - - -	______	______ e/	17.5
Labor units on livestock - - - - - - -	______	______	20.3
Total labor units- - - - - - - - - - -	______	______	37.8
Total months of labor- - - - - - - - -	______	______	21.1
Labor units per worker - - - - - - - -			21.5
Other Expense Factors			
Horse and machinery cost per crop acre	$______	$______ d/	$ 9.28
Land improvements cost per acre- - - -	______	.90	.90
Buildings cost per acre- - - - - - - -	______	______ e/	1.81
Land tax per acre- - - - - - - - - - - -	______	______ a/	1.19

a/ Table 5, value of improved land
b/ Fig. 1, value of improved land
c/ Table 7, source of income
d/ Table 9, size of farm and value of feed fed per acre
e/ Table 8, size of farm

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS

Accounting Farms in Farming-Type Area 2, 1943

The numbers above the double line are the averages for the farms similar in organization to your farm. By drawing a line across each column at the place which measures the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

			Factors that affect the gross earnings										Factors that affect expenses		
				Crop yields											
Rate earned on investment, percent	Acres in farm	Gross earnings per acre	Percent of tillable land in legume hay and pasture	Corn, bu.	Oats, bu.	Soybeans, bu.	Feed fed per acre to prod. l.s.	Returns per $100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked	Gross expense per acre	Horse and machinery cost per crop acre	Labor cost per crop acre	Buildings cost per acre
30.5									7.72						
27.5									7.22						
24.5									6.72						
21.5									6.22						
18.5									5.72						
15.5									5.22						
12.5									4.72						
9.5									4.22						
6.5									3.72						
3.5									3.22						
.5									2.72						
* 3%	20	$5	2%	5 bu.	5 bu	3 bu.	$5	$10	$.50	$15	$10	$2	$1	$1	$.50

*Each space between the horizontal lines represents the value indicated at bottom of each column.

TABLE 5.--USE OF TILLABLE LAND AND OTHER FACTORS
RELATED TO THE VALUE OF IMPROVED LAND
Accounting Farms in Farming-Type Area 2, 1943

Item	Value of improved land					
	Less than $53	$53 to $72	$73 to $92	$93 to $112	$113 to $132	$133 or more
Average value of improved land-	$ 44	$ 64	$ 83	$ 102	$ 122	$ 143
Number of farms - - - - - - - - -	17	36	56	53	44	29
Acres per farm- - - - - - - - - -	190	218	181	178	223	192
Percent of land area tillable -	69.3	77.1	83.3	83.8	89.0	92.8
Percent of tillable land in:						
Corn- - - - - - - - - - - - - -	32.8	34.8	38.1	38.9	42.9	40.8
Oats- - - - - - - - - - - - - -	18.6	21.4	20.8	21.3	21.3	22.4
Wheat - - - - - - - - - - - - -	--	.7	1.0	.7	.6	.1
Soybeans- - - - - - - - - - - -	2.0	2.4	5.4	4.0	6.4	3.9
Other crops - - - - - - - - - -	4.4	3.2	5.2	3.8	5.9	6.2
Legume hay and pasture- - - -	20.4	21.4	17.1	18.3	12.4	15.8
Nonlegume hay and pasture - -	21.8	16.1	12.4	13.0	10.5	10.8
Gross earnings per acre[1] - - -	$36.89	$41.80	$49.04	$49.58	$57.82	$63.96
Gross expenses per acre[1] - - -	20.69	19.03	21.70	21.88	22.16	25.05
Net earnings per acre - - - - -	$16.20	$22.77	$27.34	$27.70	$35.66	$38.91
Land tax per acre - - - - - - - -	$ .86	$ .93	$ 1.15	$ 1.23	$ 1.34	$ 1.52

[1] Used in Table 4.

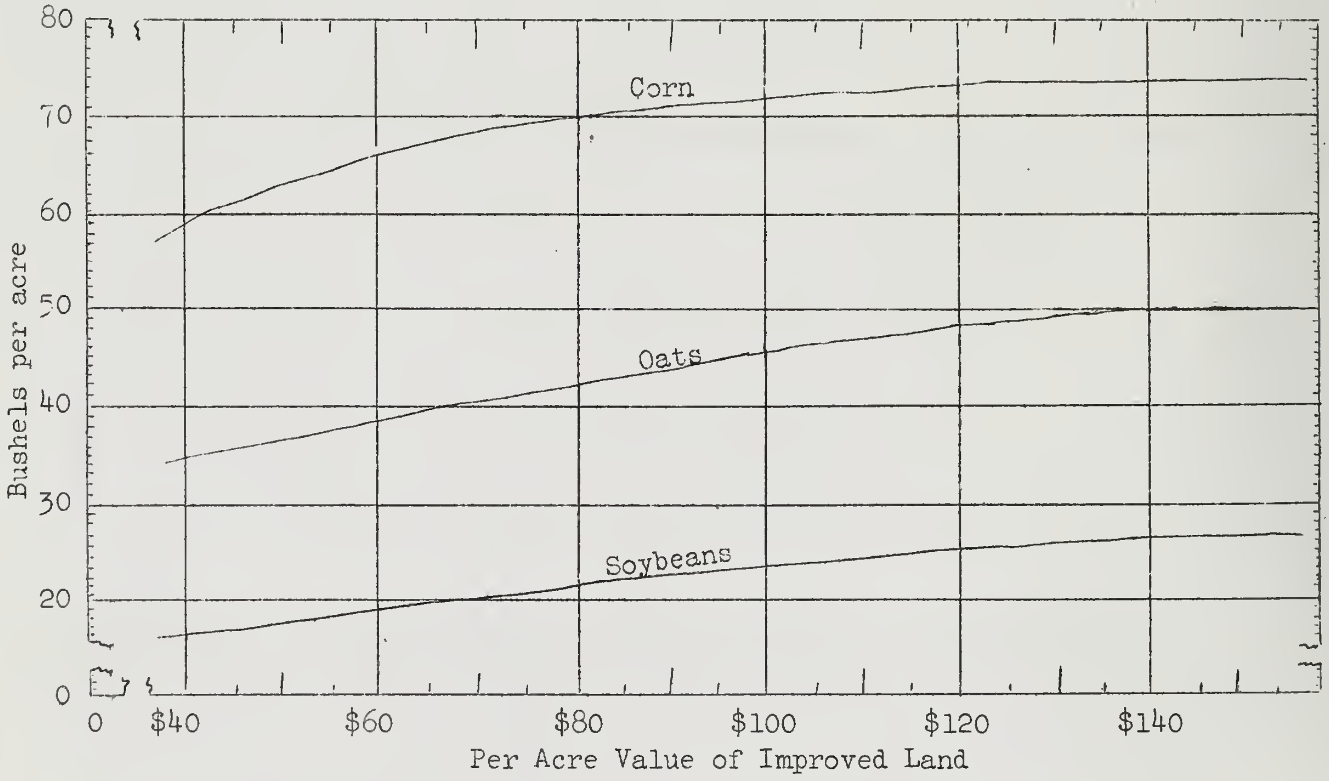

Fig. 1.--Average Yields of Corn, Oats, and Soybeans with Varying Values of Improved Land

Unpaid family labor. The total valuation of unpaid labor was higher for 1943 than for any other year in the past four. This increase resulted principally from the fact that the physical labor of the operator and other members of the family was valued at prevailing farm wages in Area 2, which were approximately $100 per month in 1943, $70 per month in 1942, $55 per month in 1941, and $50 per month in 1940.

Variation in farm earnings. A wide variation was found in earnings on the farms in Area 2. For example, 47 farms earned less than ten percent on their investment but 28 farms earned 22 percent or more (Table 6). After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had $1,952 for their labor and management earnings contrasted with $7,749 for the latter group.

Table 6.--Variation in 1943 Earnings, 235 Accounting Farms in Area 2

Rate earned on investment	Number of farms	Average rate earned	Acres per farm	Capital invested per farm	Gross earnings per farm	Net earnings per farm	Labor and management earnings
(percent)		(percent)					
Less than 10.00	47	7.4	186	33 734	8 100	2 492	1 952
10.00 to 13.99	47	12.2	190	39 108	10 222	4 767	3 977
14.00 to 17.99	61	16.0	199	37 367	10 587	5 966	5 239
18.00 to 21.99	52	20.0	207	38 563	12 169	7 715	6 951
22.00 or more	28	24.8	196	33 215	12 634	8 228	7 749

Explanation of Tables

Variable standards are used in analyzing the farm business (Table 4). They make allowances for the following facts: (1) that the quality of land affects the cropping system and the crop yields; (2) that the kind of livestock influences the amount of feed fed and the returns per $100 worth of feed fed; (3) that the size and intensity of the farm business affects practically all the cost items; and (4) that price relationships and quantities of the products produced affect the relative profitableness of various types of farming for any particular year.

The terms used in the tables are the same as the terms used in the Illinois farm account book. For example, "improved land" is classified on Page 1 of the farm account book. It means crop land, tillable pasture, and land occupied by farmstead, roads, and lanes. Likewise, "crop acres" are listed on page 20 of the farm account book. They include all the tillable land on which a large amount of work has been done in preparing a seedbed or in cultivating or harvesting a crop.

(Note: A labor unit is explained on page 12.)

Land Use and Crop Yields

The percent of tillable land in grain crops increased as the value per acre for improved land increased (Table 5). Likewise, the earnings per acre and the land tax per acre increased as the value of improved land increased. On the other hand, the trend in percent of tillable land in legume and nonlegume hay and pasture went downward as the value of the land increased.

Yields per acre for corn, oats, and soybeans tended to increase as the land value increased (Fig. 1). By using Table 5 and Figure 1, the account keeper may find out whether his acreage in various crops, crop yields, and earnings per acre were high or low in comparison with the average of other farms in his area having about the same value of improved land.

TABLE 7.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 2, 1943

					General farms	
Item	Grain 40% +	Dairy 40% +	Hogs 40% +	Cattle 40% +	L.S. 60% -	L.S. 60% +
Number of farms - - - - - - - - -	22	21	93	27	12	60
Percent of income from prod. l.s.	43.5	90.8	91.7	93.7	55.0	83.8
Percent of income from crops- -	48.9	1.4	--	--	35.5	7.0
Investments						
Total per farm- - - - - - - -	$40 070	$35 419	$34 082	$56 462	$36 825	$31 282
Total per acre- - - - - - - - -	180	186	181	229	199	175
Land per acre - - - - - - - - -	98	87	90	99	114	88
Land improvements per acre- -	4.07	3.28	3.75	4.59	2.18	3.35
Buildings per acre- - - - - -	22.65	37.43	24.65	29.88	20.33	23.56
Machinery per acre- - - - - -	12.51	14.89	13.22	15.41	14.33	13.29
Earnings						
Per farm						
Gross earnings- - - - - - - -	$10 956	$10 075	$ 9 530	$15 234	$ 9 883	$ 8 443
Gross expenses- - - - - - - -	3 987	4 403	4 358	6 393	3 679	3 943
Net earnings- - - - - - - - -	$ 6 969	$ 5 672	$ 5 172	$ 8 841	$ 6 204	$ 4 500
Net earnings per acre - - - -	31.27	29.73	27.41	35.82	33.49	25.23
Rate earned on investment - -	17.4%	16.0%	15.2%	15.7%	16.8%	14.4%
Labor and management earnings	$ 6 140	$ 5 079	$ 4 599	$ 7 231	$ 5 434	$ 4 113
Size and Intensity						
Acres per farm- - - - - - - -	223	191	189	247	185	178
Percent of land area tillable	85.9	81.1	82.3	93.5	91.7	78.4
Percent tillable land in grain	71.9	60.6	66.7	69.2	72.6	61.4
Percent in hay and pasture- -	23.5	36.4	30.7	25.8	24.7	34.0
Feed fed per acre to prod. l.s.[1]	$ 16.28	$ 29.00	$ 35.19	$ 49.59	$ 24.05	$ 28.85
Number of litters farrowed[1] -	14.5	16.9	26.7	23.1	14.7	16.6
Average number of cows milked[1]	5.6	20.3	7.4	4.6	5.9	11.3
Months of labor per 100 crop A.	11.3	18.0	16.3	13.4	11.7	17.7
Total months of labor - - - -	18.7	22.7	20.8	26.4	17.3	20.3
Crop Yields Per Acre						
Corn, bu. - - - - - - - - - - -	66.4	70.2	69.8	74.1	67.1	70.0
Oats, bu. - - - - - - - - - - -	47.8	43.3	42.0	47.0	48.3	43.5
Livestock Returns						
Per $100 feed fed[1] - - - - -	$ 137	$ 171	$ 136	$ 119	$ 128	$ 143
Hog returns per litter[1] - - -	183	165	200	165	168	172
Dairy returns per cow[1] - - -	108	248	150	147	142	169
Labor Factors						
Labor cost per crop acre- - -	$ 11.35	$ 17.55	$ 15.84	$ 13.68	$ 12.41	$ 17.81
Labor units on crops- - - - -	22.0	15.2	16.3	26.5	19.3	14.2
Labor units on livestock- - -	13.2	28.9	20.4	21.2	13.8	20.7
Total labor units - - - - -	35.2	44.1	36.7	47.7	33.1	34.9
Labor units per worker- - - -	22.6	23.4	21.2	21.7	22.9	20.6
Other Expense Factors						
Horse and machinery cost per crop acre - - - - - - - - - -	$ 7.02	$ 10.25	$ 9.68	$ 8.82	$ 8.07	$ 10.11
Land improvements cost per acre	1.03	.64	.86	1.25	.63	.85
Buildings cost per acre - - -	1.61	2.20	1.74	2.20	1.19	1.77
Land tax per acre - - - - - -	1.15	1.18	1.20	1.26	1.33	1.14

[1] Used in Table 4.

Source of Income

The grouping of accounting farms according to source of income gives each farmer an opportunity to compare his farm with the average of other farms having similar sources of income. It also gives him an opportunity to study investments, land use, crop yields, labor requirements, horse and machinery requirements, and other factors that are associated with various types of farming.

Interpretation of table. Each farmer should, however, use caution in interpreting the data in Table 6. For example, the fact that grain farms earned 17.4 percent on the investment for 1943 and general livestock farms earned 14.4 percent does not mean that such a relationship will prevail over a long period of years. The relative profitableness of enterprises is due largely to conditions affecting price and production.

In comparing the returns on the various groups of farms per $100 worth of feed fed, one should consider the fact that there is a wide variation in the needed returns per $100 worth of feed fed to pay for feed (including pasture), labor, equipment, buildings, and other costs. According to 5-year averages of complete cost studies (1933-1937), the necessary returns were: poultry, $195; dairy cattle, $157; hogs, $127 and feeder cattle, $117.

Furthermore, as one studies the livestock returns and notes that hog returns per litter were largest on the hog farms and dairy returns per cow were largest on the dairy farms, he should keep in mind the fact that intensified enterprises are usually associated with increased expenses, and larger returns per unit of production from the specialized enterprise are usually necessary if the farm is to be as profitable as other farms.

Labor. Labor cost per crop acre varied from $11.35 on the grain farms to $17.81 on the general farms with the most livestock, and to $17.55 on the dairy farms. In general, farms with the smallest number of crop acres and the most livestock had the highest labor cost per crop acre. Total labor units varied from 33.1 on the general farms with the least livestock to 47,7 on the cattle farms. There was no significant difference in labor units per worker for the various groups.

Other expense factors. Horse and machinery cost per crop acre was smallest on the grain farms, where it averaged $7.02 and largest on the dairy farms, where it averaged $10.25; land improvements cost per acre varied from $.63 on the general farms with the least livestock to $1.25 on the cattle farms; and buildings cost per acre ranged from $1.19 on the general farms with the least livestock to $2.20 on the dairy and cattle farms.

Size of Farm

When average farm earnings are above the capitalization rate (5 percent is the usual rate used), large farms usually show higher labor and management earnings than small farms. Conversely, when average farm earnings are below the capitalization rate, large farms show a greater loss. In 1943, with farm earnings averaging 15.5 percent in Area 2, the labor and management earnings on the 10 largest farms averaged $10,445 contrasted with $3,141 on the 40 smallest farms.

The rate earned on investment did not show any consistent variation due to size of the farm.

TABLE 8.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 2, 1943

Item	Total acres in farm				
	Less than 121	121 to 200	201 to 280	281 to 360	361 or more
Number of farms	40	108	60	17	10
Acres in farm[1]	104	163	238	318	455
Acres in crops[1]	73	114	169	206	329
Investments					
Total per farm	$20 911	$31 777	$44 416	$53 904	$78 870
Total per acre	201	195	187	169	173
Land improvements per acre	3.81	3.92	3.08	3.23	5.20
Buildings per acre[1]	27.71	28.73	24.56	18.90	25.23
Machinery per acre	17.83	14.52	12.85	10.83	12.58
Earnings					
Per farm					
Gross earnings	$ 6 323	$ 8 572	$12 129	$13 338	$21 275
Gross expenses	3 286	3 985	4 572	5 505	7 966
Net earnings	$ 3 037	$ 4 587	$ 7 557	$ 7 833	$13 309
Net earnings per acre	29.15	28.08	31.75	24.61	29.27
Rate earned on investment	14.5%	14.4%	17.0%	14.5%	16.9%
Labor and management earnings	$ 3 141	$ 4 165	$ 6 492	$ 6 306	$10 445
Size and Intensity					
Percent of land area tillable	85.7	85.0	84.1	77.8	82.9
Percent tillable land in grain	62.4	64.4	68.4	64.3	73.3
Percent in hay and pasture	34.1	32.3	27.5	30.0	24.4
Feed fed per acre to prod. l.s.	$ 38.57	$ 36.38	$ 29.78	$ 27.38	$ 28.66
Percent of income from prod. l.s.	91.7	90.8	77.0	81.2	79.0
Percent of income from crops	--	--	16.0	11.1	13.0
Months of labor per 100 crop A.	23.0	18.0	12.7	12.6	10.4
Total months of labor[1]	16.7	20.6	21.5	25.9	34.4
Crop Yields per Acre					
Corn, bu.	72.9	71.7	70.2	66.1	65.4
Oats, bu.	45.7	44.2	46.5	39.9	38.2
Livestock Returns					
Per $100 feed fed	$ 151	$ 136	$ 136	$ 129	$ 132
Hog returns per litter	185	181	190	185	219
Dairy returns per cow	168	165	185	187	186
Labor Factors					
Labor cost per crop acre	$ 22.25	$ 17.61	$ 12.93	$ 12.92	$ 10.77
Labor units on crops[1]	9.1	14.4	21.9	26.6	42.4
Labor units on livestock[1]	16.1	20.4	20.4	24.2	29.8
Total labor units[1]	25.2	34.8	42.3	50.8	72.2
Labor units per worker[1]	18.1	20.2	23.6	23.5	25.2
Other Expense Factors					
Horse and machinery cost per crop acre	$ 11.53	$ 10.04	$ 8.51	$ 8.71	$ 7.46
Land improvements cost per acre	1.00	.90	.86	.64	1.26
Buildings cost per acre[1]	2.16	2.01	1.66	1.31	1.81
Land tax per acre	1.32	1.24	1.17	1.13	1.03

[1] Used in Table 4.

Intensity. The smaller farms were operated more intensively than were the larger ones. This variation was indicated by the larger amount of feed fed per acre to productive livestock, and by more months of labor per 100 crop acres.

Labor. As the size of the farms increased from less than 121 acres to 361 acres or more, the labor cost per crop acre decreased from $22.25 to $10.77. On the other hand, labor units on crops increased from 9.1 to 42.4; labor units on livestock increased from 16.1 to 29.8; total labor units increased from 25.2 to 72.2; and labor units per worker increased from 18.1 to 25.2.

Other expense items. Expense per crop acre from the smallest to the largest size group decreased for horses and machinery from $11.53 to $7.46; and for taxes from $1.32 to $1.03. Land improvements cost per crop acre and building cost per acre also decreased consistently from the smallest size group to farms ranging in size from 281 to 360 acres, then increased for the largest size group.

The method used to increase the volume of business depended upon the individual farmer. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Labor and Horse and Machinery Expenses

Labor and horse and machinery expenses per crop acre increase as the amount of livestock per acre increases, but decrease as the size of farm increases. Therefore the efficiency of a farm in using labor and machinery should be determined by comparing the expenses on the individual farm with those of other farms of the same size having similar amounts of livestock per acre. The average labor cost per crop acre and the average horse and machinery cost per crop acre are shown for farms grouped according to acres per farm and value of feed fed per acre to productive livestock (Table 9).

TABLE 9.--LABOR COST PER CROP ACRE AND HORSE AND MACHINERY COST PER CROP ACRE FOR VARIATIONS IN SIZE OF FARM AND AMOUNT OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK
Accounting Farms in Farming-Type Area 2, 1943

Acres per farm	Feed fed per acre				Feed fed per acre			
	Less than $18.00	$18.00 to $27.99	$28.00 to $37.99	$38.00 or more	Less than $18.00	$18.00 to $27.99	$28.00 to $37.99	$38.00 or more
	(labor cost per crop acre)				(horse and machinery cost per crop acre)			
Less than 121	$17.08	$18.36	$20.18	$24.73	$10.00	$10.29	$11.75	$12.03
121 to 200	16.99	17.24	17.95	18.27	8.70	9.56	10.00	10.51
201 to 280	12.60	12.00	12.97	13.91	7.52	7.73	8.40	9.78
281 to 360	12.50	12.71	12.90	13.00	8.00	7.63	8.57	9.43
361 or more	8.41	9.86	10.81	12.82	5.00	6.49	8.00	8.81

Supplementary Labor Analysis

Labor units are used in this report to supplement the foregoing measures of labor efficiency.

A labor unit is essentially the same as a war unit. It is the approximate amount of time under average conditions that is required to take care of a dairy cow for one year or to do an equivalent amount of work with other livestock or crops. For example, the labor unit assumes that one dairy cow requires about as much work as 5.5 acres of corn, 8.3 acres of soybeans for grain, 14.3 acres of small grain or hay, 10 beef cows, 20 feeder cattle, 3 litters of pigs, 33 sheep, 160 feeder lambs, or 77 hens.

Obviously, no other computation of work units for the individual farmer will agree with those written in this report unless the acres and classification of crops as well as the numbers and kinds of livestock are the same as those recorded in the farm account book.

Labor Saving References

Labor simplification is suggested by the picture on the front cover of this report. For additional suggestions, ideas, and plans see your farm adviser or write directly to the University of Illinois, for the following publications:

Department of Agricultural Economics

"Making Your Labor Go Further," mimeograph AE-2182
"Feeding Cattle With Less Labor," AE-2169
"Making the Most of Available Labor," AE-2001

Emergency Farm Labor Office

"Making Food With Less Labor," printed leaflet

Department of Agricultural Engineering

"Hog Equipment," Circular 554
In addition, the Department of Agricultural Engineering supplies lists from which plans for labor saving devices, equipment, and structures may be selected.

Producing for War Needs

The account keeper should use the standards in this report to compare his own production with that of other account keepers. He should then adopt on his farm the kind of farm plan and the management practices that will make the best possible use of land, buildings, livestock, labor, machinery, and other resources for the duration of the war. Thus he will have more products to put on the nation's markets and so will be making the greatest possible contribution to the war effort.

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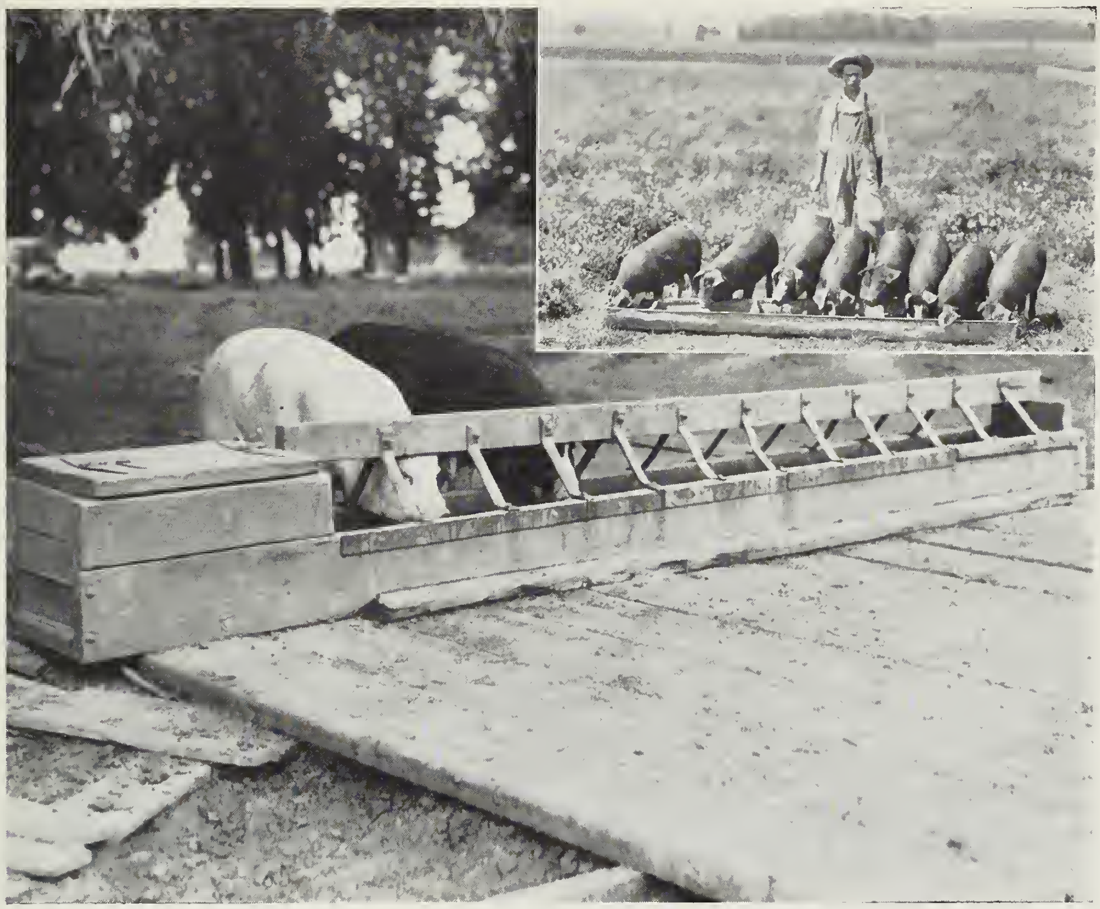

Labor-saving methods and devices lead to increased wartime production. This homemade waterer, which may be attached to a pressure system or to a tank wagon, is float controlled, requires little attention and provides fresh water at all times. Moreover, it is mudhole proof. Upper right — the hard way.

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FARMING-TYPE AREA THREE
Western Livestock and Grain Area

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

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Annual Farm Business Report

ON THREE HUNDRED ELEVEN FARMS IN FARMING-TYPE AREA 3, 1943

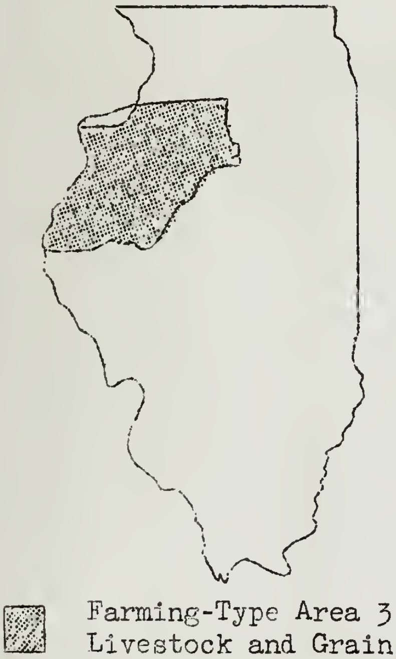
By J. B. Cunningham, L. F. Stice, and E. N. Searls[1]

Production. Included in the group of 311 accounting farmers in Farming-Type Area 3, were 210 farmers who operated the same farms in 1943 as in 1942. These 210 farmers attempted to step-up production in 1943 over that of 1942 by increasing grain acreage, number of pigs, and number of hens.

Table 1.--Production Changes on the Same 210 Farms, 1942 and 1943, Area 3

Item (Average per farm)	1942	1943	Change Actual	Change Per Cent
Acres	218	218	0	0
Acres of grain crops	120	123	3	2.5
Number of cows milked	5	5	0	0
Number of pigs weaned	181	194	13	7.2
Number of hens	108	116	8	7.4
Total months of labor	21	21	0	0
Value of machinery (beginning of year)	$2 152	$2 354	$ 202	9.4
Tons of grain produced	166	163	3	-1.8
Value of production of livestock and livestock products[a] - total	$8 871	$8 109	$-762	-8.6
Beef cattle	2 050	1 716	-334	-16.3
Dairy sales	456	464	8	1.7
Hogs	5 775	5 352	-423	-7.3
Sheep	184	134	-50	-27.4
Poultry and eggs	406	443	37	9.1

[a] 1943 values adjusted to 1942 price level.


▨ Farming-Type Area 3
Livestock and Grain

Accounting farmers used the same amount of labor but more machinery and equipment in 1943 than in 1942. The increase, however, was in livestock equipment rather than in heavy farm machinery.

Grain production decreased from 166 tons in 1942 to 163 tons in 1943 due to smaller yields per acre of corn and oats. Livestock production in 1943, as measured by receipts and net increases adjusted to 1942 prices, showed decreases for beef cattle, hogs, and sheep; but increases for dairy sales and poultry and eggs.

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[1] J. A. Snyder supervised the closing of the farm accounts and the preparation of the tables used in the report. The farm advisers who supervised the project, the cooperating county farm bureaus, and the number of records by counties follow: H. K. Danforth, Henry, 45; R. G. Benbow, McDonough, 44; A. J. Rehling, Henderson, 35; L. L. Norton, Hancock, 31; A. R. Kemp, Knox, 30; J. E. Watt, Fulton, 30; E. H. Walworth, Warren, 25; Paul V. Dean, Bureau, 24; W. A. Gilbert, Stark, 21; I. F. Green, Peoria, 18; L. J. Hager, Marshall-Putnam, 15; and E. M. Edwards, Mercer, 13.

TABLE 2.--INVENTORY CHANGES, CASH INCOME, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 3, 1940-1943

Item	Your farm	Average of all farms in area			
		1943	1942*	1941*	1940*
Number of farms- - - - - - - - - - -	--	311	580	594	536
Acres per farm - - - - - - - - - - -	______	224	249	241	249
Inventory Changes					
Land improvements- - - - - - - -	$______	$ 33	$ 28	$) 51	$) 88
Farm buildings - - - - - - - - -	______	-12	-19	)	)
Horses - - - - - - - - - - - - - -	______	-15	-10	-38	-36
Productive livestock - - - - - -	______	151	1 610	1 376	632
Feed, grain, and seeds - - - - -	______	925	792	1 023	-82
Machinery and equipment- - - - -	______	67	187	257	59
Automobile (farm share)- - - - -	______	-22	-23	29	-1
Total- - - - - - - - - - - - - - -	$	$ 1 127	$ 2 565	$ 2 698	$ 660
Cash Receipts					
Land improvements- - - - - - - -	$______	$ 2	$ 4	$) 5	$) 18
Farm buildings - - - - - - - - -	______	2	26	)	)
Horses - - - - - - - - - - - - - -	______	36	36	32	36
Productive livestock: Cattle - -	______	3 126	4 158	2 806	2 643
Dairy sales	______	571	530	475	365
Hogs - - -	______	5 558	6 075	3 485	2 020
Sheep- - -	______	315	388	266	264
Poultry- -	______	209	156	121	94
Egg sales-	______	364	267	173	115
Total productive livestock - - -	(______)	(10 143)	(11 574)	(7 326)	(5 501)
Feed, grain, and seeds - - - - -	______	2 845	2 345	1 853	1 600
Machinery and equipment- - - - -	______	228	238	292	244
Automobile (farm share)- - - - -	______	19	20	63	51
AAA receipts - - - - - - - - - - -	______	350	582	518	546
Labor off farm - - - - - - - - - -	______	33	37	40	58
Miscellaneous- - - - - - - - - - -	______	5	14	22	18
Total- - - - - - - - - - - - - - -	$	$13 663	$14 876	$10 151	$ 8 072
Cash Expenses					
Land improvements- - - - - - - -	$______	$ 187	$ 212	$) 417	$) 429
Farm buildings - - - - - - - - -	______	291	367	)	)
Horses - - - - - - - - - - - - - -	______	32	34	18	24
Productive livestock: Cattle - -	______	1 330	2 141	1 348	1 404
Hogs - - -	______	319	300	190	138
Sheep- - -	______	161	183	236	172
Poultry- -	______	57	40	30	23
Total productive livestock - - -	(______)	(1 867)	(2 664)	(1 804)	(1 737)
Feed and grain purchases - - - -	______	2 565	2 515	1 495	986
Crop and sealing expense - - - -	______	261	235	159	174
Machinery and equipment- - - - -	______	1 328	1 516	1 281	956
Automobile (farm share)- - - - -	______	154	159	221	167
Livestock expense- - - - - - - -	______	123	123	84	71
Hired labor- - - - - - - - - - - -	______	680	697	515	466
Taxes- - - - - - - - - - - - - - -	______	328	366	343	336
Miscellaneous- - - - - - - - - - -	______	39	55	42	40
Total- - - - - - - - - - - - - - -	$	$ 7 855	$ 8 943	$ 6 379	$ 5 386
Summary					
Total inventory change - - - - -	$______	$ 1 127	$ 2 565	$ 2 698	$ 660
Cash balance - - - - - - - - - - -	______	5 808	5 933	3 772	2 686
Farm products used in household-	______	376	366	293	252
Receipts less expenses - - - - -	$	$ 7 311	$ 8 864	$ 6 763	$ 3 598

*Includes Farm Bureau Farm Management Service records.

TABLE 3.--INVESTMENTS AND EARNINGS
Accounting Farms in Farming-Type Area 3, 1940-1943

Item	Your farm	Average of all farms in area			
		1943	1942*	1941*	1940*
Capital Investments					
Land- - - - - - - - - - - - - - - -	$____	$20 651	$24 045	$23 338	$23 757
Land improvements - - - - - - - -	____	726	890	4 903	5 023
Farm Buildings- - - - - - - - - -	____	3 534	4 339		
Horses- - - - - - - - - - - - - -	____	204	225	261	312
Productive livestock: Cattle- -	____	2 741	2 935	2 390	2 244
Hogs- - -	____	2 273	1 860	1 012	969
Sheep - -	____	223	255	159	144
Poultry -	____	139	120	85	83
Total productive livestock- - -	( )	(5 376)	(5 170)	(3 646)	(3 440)
Feed, grain, and seeds- - - - -	____	3 868	4 222	3 108	3 555
Machinery and equipment - - - -	____	2 321	2 500	2 157	2 198
Automobile (farm share) - - - -	____	293	306	217	208
Total - - - - - - - - - - - - -	$	$36 973	$41 697	$37 630	$38 493
Receipts less expenses- - - - -	$____	$ 7 311	$ 8 864	$ 6 763	$ 3 598
Family labor- - - - - - - - - - -	____	336	271	168	168
Returns for labor, capital, mgt.	$____	$ 6 975	$ 8 593	$ 6 595	$ 3 430
Operator's labor- - - - - - - -	____	1 120	768	596	527
Net earnings per farm - - - -	$____	$ 5 855	$ 7 825	$ 5 999	$ 2 903
Net earnings per acre - - - - - -	____	26.13	31.39	24.91	11.67
Rate Earned on Investment - - - -	____%	15.8%	18.8%	15.9%	7.5%
Interest on investment- - - - -	$____	$ 1 849	$ 2 085	$ 1 881	$ 1 924
Labor and Management Earnings - -		5 126	6 508	4 714	1 506

*Includes Farm Bureau Farm Management Service records.

Net earnings. The net earnings per farm on an inventory basis were lower in 1943 than in 1942; the average was $5,855 in 1943 compared with $7,825 in 1942. This decrease was due, in part, to smaller farms in 1943 when Farm Bureau Farm Management Service farms were not included. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. It is calculated by adding to the cash balance the value of farm products used in the household and the inventory increases and by subtracting from the resulting total the value of unpaid labor. Therefore this figure indicates the earning power of the business and determines the real value of the farm and its equipment. The average net earnings per acre were $26.13 in 1943, $31.39 in 1942, $24.91 in 1941, and $11.67 in 1940.

Inventory changes. The year 1943 was the eleventh consecutive year in which inventories were increased. The largest increase for the past four years was $2,698 in 1941 and the smallest was $660 in 1940. In 1943 the largest money increase was for feed, grain, and seeds. The average amounts of grain on hand in Area 3 at the two inventory periods were:

Crop	Beginning of year	End of year
	(bushels)	(bushels)
Corn	3,353	3,483
Oats	617	646
Wheat	24	20
Soybeans	206	81

TABLE 4.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 3, 1943

Item	Your farm	Standards for your farm	Average of 311 farms
Rate earned on investment- - - - - - - -	________%	15.8%	15.8%
Acres in farm- - - - - - - - - - - - - - -	________	________ e/	224
Acres in crops - - - - - - - - - - - - - -	________	________	147
Gross earnings per acre- - - - - - - - -	$________	$________ a/	$ 45.23
Gross expenses per acre- - - - - - - - -			19.10
Investments			
Value of land per acre - - - - - - - -	$________	$ 92	$ 92
Value of improved land per acre- - -	________	________ a/	104
Value of buildings per acre- - - - -	________	________ e/	16
Total investment per acre- - - - - - -		165	165
Land Use			
Percent of land area tillable- - - -	________	________ a/	78.6
Percent of tillable land in:			
Corn - - - - - - - - - - - - - - - - -	________	________	41.6
Oats - - - - - - - - - - - - - - - - -	________	________	17.0
Wheat- - - - - - - - - - - - - - - - -	________	________	1.3
Soybeans - - - - - - - - - - - - - - -	________	________	10.6
Other crops- - - - - - - - - - - - - -	________	________	2.7
Legume hay and pasture - - - - - - -	________	________	16.5
Nonlegume hay and pasture- - - - - -			10.3
Crop Yields			
Corn, bu.- - - - - - - - - - - - - - -	________	________ b/	62.8
Oats, bu.- - - - - - - - - - - - - - -	________	________	38.2
Wheat, bu. - - - - - - - - - - - - - -	________	14.3	14.3
Soybeans, bu.- - - - - - - - - - - - -		b/	23.3
Livestock Factors			
Value of feed fed to prod. l.s.- - - -	$________	$6 335	$6 335
Feed fed per acre to prod. l.s.- - - -	________	________ c/	28.27
Returns per $100 worth of feed fed - -	________	________	138
Poultry returns per hen- - - - - - - -	________	5.32	5.32
Number of litters farrowed - - - - - -	________	________ c/	31
Number of pigs weaned per litter - - -	________	6.0	6.0
Returns per litter farrowed- - - - - -	$________	$________ c/	$ 184
Average number of cows milked- - - - -	________	5.6	5.6
Dairy returns per cow milked - - - - -	$	$ c/	$ 122
Labor Factors			
Labor cost per crop acre - - - - - - -	$________	$________ d/	$ 14.30
Labor units on crops - - - - - - - - -	________	________ e/	19.6
Labor units on livestock - - - - - - -	________	________	19.6
Total labor units- - - - - - - - - -	________	________	39.2
Total months of labor- - - - - - - - -	________	________	21.4
Labor units per worker - - - - - - - -			22.0
Other Expense Factors			
Horse and machinery cost per crop acre	$________	$________ d/	$ 9.03
Land improvements cost per acre- - - -	________	.68	.68
Buildings cost per acre- - - - - - - -	________	________ e/	1.34
Land tax per acre- - - - - - - - - - -		a/	1.20

a/ Table 5, value of improved land
b/ Fig. 1, value of improved land.
c/ Table 7, source of income.
d/ Table 9, size of farm and value of feed fed per acre.
e/ Table 8, size of farm.

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS

Accounting Farms in Farming-Type Area 3, 1943

The numbers above the double line across the middle of the page are the averages for the farms similar in organization to your farm. By drawing a line across each column at the place which measures the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

			Factors that affect the gross earnings										Factors that affect expenses		
				Crop yields											
Rate earned on investment, percent	Acres in farm	Gross earnings per acre	Percent of tillable land in legume hay and pasture	Corn, bu.	Oats, bu.	Soybeans, bu.	Feed fed per acre to prod. l.s.	Returns per $100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked	Gross expense per acre	Horse and machinery cost per crop acre	Labor cost per crop acre	Buildings cost per acre
30.8									7.82						
27.8									7.32						
24.8									6.82						
21.8									6.32						
18.8									5.82						
15.8									5.32						
12.8									4.82						
9.8									4.32						
6.8									3.82						
3.8									3.32						
.8									2.82						
* 3%	20	$4	2%	5 bu.	5 bu.	3 bu.	$4	$15	$.50	$15	$10	$2	$1	$1	$.30

*Each space between the horizontal lines represents the value indicated at bottom of each column.

TABLE 5.--USE OF TILLABLE LAND AND OTHER FACTORS RELATED TO THE VALUE OF IMPROVED LAND
Accounting Farms in Farming-Type Area 3, 1943

Item	Value of improved land					
	Less than $53	$53 to $72	$73 to $92	$93 to $112	$113 to $132	$133 or more
Average value of improved land-	$ 43	$ 65	$ 82	$102	$122	$148
Number of farms - - - - - - - - -	19	30	65	86	74	37
Acres per farm- - - - - - - - - -	206	190	266	233	196	225
Percent of land area tillable -	55.3	67.8	71.1	82.8	86.4	88.8
Percent of tillable land in:						
Corn- - - - - - - - - - - - - -	38.8	43.6	40.0	41.4	41.2	45.6
Oats- - - - - - - - - - - - - -	12.4	15.5	16.5	16.6	18.9	17.3
Wheat - - - - - - - - - - - - -	2.5	1.1	1.8	1.0	1.6	.2
Soybeans- - - - - - - - - - - -	5.1	11.5	11.1	12.8	8.6	9.5
Other crops - - - - - - - - - -	4.7	1.8	2.5	2.2	2.5	4.3
Legume hay and pasture- - - -	18.0	16.4	16.9	16.0	16.9	15.0
Nonlegume hay and pasture - -	18.5	10.1	11.2	10.0	10.3	8.1
Gross earnings per acre[1] - - -	$ 26.75	$ 39.26	$ 37.52	$ 47.31	$ 52.37	$ 56.74
Gross expenses per acre[1] - - -	15.10	17.83	16.74	19.52	21.98	20.86
Net earnings per acre - - - - -	$ 11.65	$ 21.43	$ 20.78	$ 27.79	$ 30.39	$ 35.88
Land tax per acre - - - - - - - -	$ .74	$ 1.13	$ 1.08	$ 1.26	$ 1.32	$ 1.36

[1] Used in Table 4.

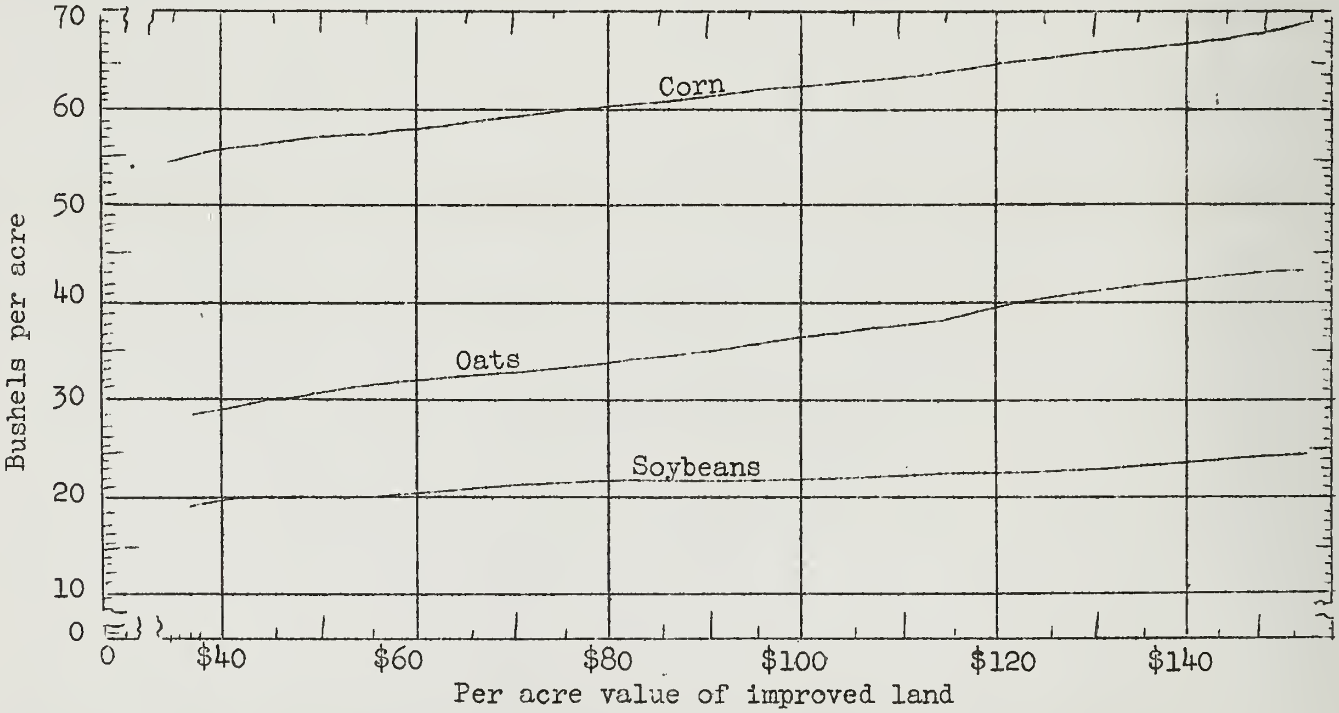

Fig. 1.--Average Yield of Corn, Oats, and Soybeans with Varying Values of Improved Land

Unpaid family labor. The total valuation of unpaid labor was higher for 1943 than for any other year in the past four. This increase resulted principally from the fact that the physical labor of the operator and other members of the family was valued at prevailing farm wages in Area 3, which were approximately $100 per month in 1943, $70 per month in 1942, $55 per month in 1941, and $50 per month in 1940.

Variation in farm earnings. A wide variation was found in earnings on the farms in Area 3. For example, 57 farms earned less than ten percent on their investment; but 24 farms earned 25 percent or more (Table 6). After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had $1,544 for their labor and management earnings contrasted with $8,713 for the latter group.

Table 6.--Variation in 1943 Earnings, 311 Accounting Farms in Area 3

Rate earned on investment	Number of farms	Average rate earned	Acres per farm	Capital invested per farm	Gross earnings per farm	Net earnings per farm	Labor and management earnings
(percent)		(percent)					
Less than 10.00	57	6.3	201	$31 985	$ 7 749	$2 025	$1 544
10.00 to 14.99	85	12.8	230	38 689	10 632	4 950	4 129
15.00 to 19.99	95	17.4	225	38 717	11 519	6 725	5 897
20.00 to 24.99	50	22.0	243	38 782	13 523	8 528	7 718
25.00 or more	24	28.5	213	32 069	13 653	9 141	8 713

Explanation of Tables

Variable standards are used in analyzing the farm business (Table 4). They make allowances for the following facts: (1) that the quality of land affects the cropping system and the crop yields; (2) that the kind of livestock influences the amount of feed fed and the returns per $100 worth of feed fed; (3) that the size and intensity of the farm business affects practically all the cost items; and (4) that price relationships and quantities of the products produced affect the relative profitableness of various types of farming for any particular year.

The terms used in tables are the same as the terms used in the Illinois farm account book. For example, "improved land" is classified on page 1 of the farm account book. It means crop land, tillable pasture, and land occupied by farmstead, roads, and lanes. Likewise, "crop acres" are listed on page 20 of the farm account book. They include all the tillable land on which a large amount of work has been done in preparing a seedbed or in cultivating or harvesting a crop.

(Note: A labor unit is explained on page 12.)

Land Use and Crop Yields

The percent of tillable land in grain crops increased as the value per acre for improved land increased (Table 5). Likewise, the earnings per acre and the land tax per acre increased as the value of improved land increased. On the other hand, the percent of tillable land in legume and nonlegume hay and pasture decreased as the value of the land increased.

Yields per acre for corn, oats, and soybeans tended to increase as the land value increased (Fig. 1). By using Table 5 and Figure 1, the account keeper may find out whether his acreage in various crops, crop yields, and earnings per acre were high or low in comparison with the average of other farms in his area having about the same value of improved land.

TABLE 7.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 3, 1943

Item	Your farm	Source of income				
		Grain 40%+	Hogs 40%+	Cattle 40%+	General farms	
					L.S. 60%-	L.S. 60%+
Number of farms	--	38	203	7	23	40
Percent of income from prod. l.s.		37.5	92.5	94.2	55.2	92.6
Percent of income from crops		55.7	--	--	36.3	--
Investments						
Total per farm	$	$40 994	$34 937	$40 830	$42 280	$39 761
Total per acre		161	165	185	172	162
Land per acre		99	90	90	102	88
Land improvements per acre		2.61	3.37	3.01	3.12	3.37
Buildings per acre[1]		13.90	16.80	15.46	14.84	13.71
Machinery per acre		11.14	11.71	13.05	11.45	11.89
Earnings						
Per farm						
Gross earnings	$	$11 372	$ 9 852	$11 411	$11 824	$10 360
Gross expenses		4 160	4 327	6 372	4 435	4 860
Net earnings	$	$ 7 212	$ 5 525	$ 5 039	$ 7 389	$ 5 500
Net earnings per acre		28.25	26.09	22.78	30.13	22.41
Rate earned on investment	%	17.6%	15.8%	12.3%	17.5%	13.8%
Labor and management earnings	$	$ 6 279	$ 4 892	$ 4 198	$ 6 440	$ 4 627
Size and Intensity						
Acres per farm		255	212	221	245	245
Percent of land area tillable		83.8	77.5	78.8	83.9	75.1
Percent tillable land in grain		77.8	69.7	60.5	71.8	69.9
Percent in hay and pasture		19.6	28.2	37.2	25.4	27.9
Feed fed per acre to prod. l.s.[1]	$	$ 13.77	$ 31.99	$ 41.70	$ 19.62	$ 29.17
Number of litters farrowed[1]		18	34	26	29	27
Months of labor per 100 crop A.		10.8	15.6	16.3	13.1	15.1
Total months of labor		20.8	21.1	22.3	22.5	23.1
Crop Yields per Acre						
Corn, bu.		61.9	62.9	69.0	66.7	60.2
Oats, bu.		39.1	38.7	43.7	33.3	36.9
Livestock Returns						
Per $100 feed fed[1]	$	$ 129	$ 139	$ 120	$ 142	$ 138
Hog returns per litter[1]		150	190	172	155	175
Dairy returns per cow[1]		104	117	124	152	137
Labor Factors						
Labor cost per crop acre	$	$ 10.13	$ 15.43	$ 16.75	$ 13.18	$ 14.54
Labor units on crops		25.8	18.1	18.1	23.0	20.2
Labor units on livestock		13.5	20.4	18.5	18.9	21.6
Total labor units		39.3	38.5	36.6	41.9	41.8
Labor units per worker		22.7	21.8	19.7	22.3	21.8
Other Expense Factors						
Horse and machinery cost per crop acre	$	$ 7.40	$ 9.46	$ 12.21	$ 7.36	$ 9.64
Land improvements cost per acre		.50	.75	.82	.61	.59
Buildings cost per acre		1.05	1.43	1.24	1.14	1.39
Land tax per acre		1.19	1.19	1.42	1.26	1.17

[1] Used in Table 4.

Source of Income

The grouping of accounting farms according to source of income gives each farmer an opportunity to compare his farm with the average of other farms having similar sources of income. It also gives him an opportunity to study investments, land use, crop yields, labor requirements, horse and machinery requirements, and other factors that are associated with various types of farming.

Interpretation of table. Each farmer should, however, use caution in interpreting the data in Table 7. For example, the fact that grain farms earned 17.6 percent on the investment for 1943 and cattle farms earned 12.3 percent does not mean that such a relationship will prevail over a long period of years. The relative profitableness of enterprises is due largely to conditions affecting price and production.

In comparing the returns on the various groups of farms per $100 worth of feed fed, one should consider the fact that there is a wide variation in the needed returns per $100 worth of feed fed to pay for feed (including pasture), labor, equipment, buildings, and other costs. According to 5-year averages of complete cost studies (1933-1937), the necessary returns were: poultry, $195; dairy cattle, $157; hogs, $127 and feeder cattle, $117.

Labor. Labor cost per crop acre varied from $10.13 on the grain farms to $16.75 on the cattle farms; whereas, labor units per worker varied from 22.7 units on the grain farms to 19.7 on the cattle farms.

Labor input per 100 crop acres was lowest on the grain farms, where 10.8 months of labor per 100 acres were used, and highest on the cattle farms where 16.3 months of labor were used. There was little difference among the five groups in the total months of labor used.

Other expense factors. The combined horse and machinery cost per crop acre, land improvements cost per acre, buildings cost per acre, and land tax per acre was lowest on the grain farms where there was the least amount of feed fed per acre to productive livestock. These expense items showed no consistent variation among the other groups of farms.

Size of Farm

When average farm earnings are above the capitalization rate (5 percent is the usual rate used), large farms usually show higher labor and management earnings than small farms. Conversely, when average farm earnings are below the capitalization rate, large farms show a greater loss. In 1943, with farm earnings averaging 15.8 percent in Area 3, the labor and management earnings on the 31 largest farms averaged $8,316 contrasted with $3,049 on the 38 smallest farms.

The rate earned on investment did not show any consistent variation due to size of the farm.

TABLE 8.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 3, 1943

Item	Total acres in farm				
	Less than 121	121 to 200	201 to 280	281 to 360	361 or more
Number of farms	38	132	83	27	31
Acres per farm[1]	102	167	245	326	472
Acres in crops[1]	70	114	162	226	276
Investments					
Total per farm	$18 479	$30 083	$40 209	$55 312	$64 343
Total per acre	180	180	164	169	136
Land improvements per acre	5.48	3.65	3.37	2.94	2.02
Buildings per acre[1]	20.40	17.25	16.26	14.95	12.13
Machinery per acre	16.78	13.35	10.86	10.74	9.43
Earnings					
Per farm					
Gross earnings	$ 5 878	$ 8 334	$11 056	$14 369	$17,089
Gross expenses	3 029	3 687	4 513	5 645	6 753
Net earnings	$ 2 849	$ 4 647	$ 6 543	$ 8 724	$10 336
Net earnings per acre	27.79	27.81	26.76	26.72	21.91
Rate earned on investment	15.4%	15.4%	16.3%	15.8%	16.1%
Labor and management earnings	$ 3 049	$ 4 238	$ 5 657	$ 7 095	$ 8 316
Size and Intensity					
Percent of land area tillable	82.2	82.0	79.1	81.9	69.8
Percent of tillable land in grain	70.5	69.6	69.5	73.8	73.4
Percent in hay and pasture	28.6	28.2	28.4	22.7	24.5
Feed fed per acre to prod. l.s.	$ 37.07	$ 33.43	$ 28.17	$ 25.65	$ 19.86
Percent of income from prod. l.s.	90.1	89.8	84.3	73.0	70.8
Percent of income from crops	--	2.6	8.3	19.6	22.4
Months of labor per 100 crop A.	22.1	16.4	14.0	12.1	11.8
Total months of labor[1]	15.4	18.6	22.6	27.4	32.6
Crop Yields per Acre					
Corn, bu.	68.1	65.4	61.4	61.6	59.2
Oats, bu.	38.5	39.4	37.5	37.6	37.3
Livestock Returns					
Per $100 feed fed	$ 146	$ 139	$ 140	$ 129	$ 133
Hogs returns per litter	181	185	183	166	201
Dairy returns per cow	122	117	117	149	125
Labor Factors					
Labor cost per crop acre	$ 22.02	$ 15.97	$ 13.87	$ 12.10	$ 11.23
Labor units on crops[1]	9.2	15.2	21.4	30.9	37.1
Labor units on livestock[1]	15.1	17.7	20.3	24.4	26.6
Total labor units[1]	24.3	32.9	41.7	55.3	63.7
Labor units per worker[1]	18.9	21.2	22.2	24.2	23.4
Other Expense Factors					
Horse and machinery cost per crop acre	$ 11.79	$ 10.19	$ 8.41	$ 7.69	$ 8.07
Land improvements cost per acre	.98	.79	.65	.69	.47
Buildings cost per acre[1]	1.70	1.59	1.33	1.11	1.04
Land tax per acre	1.32	1.25	1.22	1.18	1.07

1/ Used in Table 4.

Intensity. The smaller farms were operated more intensively than were the larger ones. This variation was indicated by the higher proportion of land area tillable, larger amount of feed fed per acre to productive livestock, and by more months of labor per 100 crop acres.

Labor. As the size of the farms increased from less than 121 acres to 361 acres or more, the labor cost per crop acre decreased from $22.02 to $11.23. On the other hand, labor units on crops increased from 9.2 to 37.1; labor units on livestock increased from 15.1 to 26.6; total labor units increased from 24.3 to 63.7; and labor units per worker increased from 18.9 to 23.4.

Other expense items. Expense per crop acre from the smallest to the largest size group decreased for horses and machinery from $11.79 to $8.07; for buildings from $1.70 to $1.04 and for land taxes from $1.32 to $1.07.

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Labor and Horse and Machinery Expenses

Labor and horse and machinery expenses per crop acre increase as the amount of livestock per acre increases, but decreases as the size of farm increases. Therefore the efficiency of a farm in using labor and machinery should be determined by comparing the expenses on the individual farm with those of farms of the same size having similar amounts of livestock per acre. The average labor cost per crop acre and the average horse and machinery cost per crop acre are shown for farms grouped according to acres per farm and value of feed fed per acre to productive livestock (Table 9).

TABLE 9.--LABOR COST PER CROP ACRE AND HORSE AND MACHINERY COST PER CROP ACRE FOR VARIATIONS IN SIZE OF FARM AND AMOUNT OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK
Accounting Farms in Farming-Type Area 3, 1943

Acres per farm	Feed fed per acre				Feed fed per acre			
	Less than $20.00	$20.00 to $27.99	$28.00 to $35.99	$36.00 or more	Less than $20.00	$20.00 to $27.99	$28.00 to $35.99	$36.00 or more
	(labor cost per crop acre)				(horse and machinery cost per crop acre)			
Less than 121	$19.22	$20.31	$22.88	$23.40	$9.00	$9.70	$10.26	$14.93
121 to 200	14.27	15.58	17.70	17.00	8.73	9.42	10.18	11.33
201 to 280	13.02	13.60	14.35	15.20	7.84	7.96	8.84	9.11
281 to 360	10.46	13.00	12.08	13.21	5.47	7.15	8.17	9.00
361 or more	10.00	10.73	11.94	14.00	7.81	8.07	8.85	9.62

Supplementary Labor Analysis

Labor units are used in this report to supplement the foregoing measures of labor efficiency.

A labor unit is essentially the same as a war unit. It is the approximate amount of time under average conditions that is required to take care of a dairy cow for one year or to do an equivalent amount of work with other livestock or crops. For example, the labor unit assumes that one dairy cow requires about as much work as 5.5 acres of corn, 8.3 acres of soybeans for grain, 14.3 acres of small grain or hay, 10 beef cows, 20 feeder cattle, 3 litters of pigs, 33 sheep, 160 feeder lambs, or 77 hens.

Obviously, no other computation of work units for the individual farmer will agree with those written in this report unless the acres and classification of crops as well as the numbers and kinds of livestock are the same as those recorded in the farm account book.

Labor Saving References

Labor simplification is suggested by the picture on the front cover of this report. For additional suggestions, ideas, and plans see your farm adviser or write directly to the University of Illinois, for the following publications:

Department of Agricultural Economics

"Making Your Labor Go Further," mimeograph AE-2182
"Feeding Cattle With Less Labor," AE-2169
"Making the Most of Available Labor," AE-2001

Emergency Farm Labor Office

"Making Food With Less Labor," printed leaflet

Department of Agricultural Engineering

"Hog Equipment," Circular 554
In addition, the Department of Agricultural Engineering supplies lists from which plans for labor saving devices, equipment, and structures may be selected.

Producing for War Needs

The account keeper should use the standards in this report to compare his own production with that of other account keepers. He should then adopt on his farm the kind of farm plan and the management practices that will make the best possible use of land, buildings, livestock, labor, machinery, and other resources for the duration of the war. Thus he will have more products to put on the nation's markets and so will be making the greatest possible contribution to the war effort.

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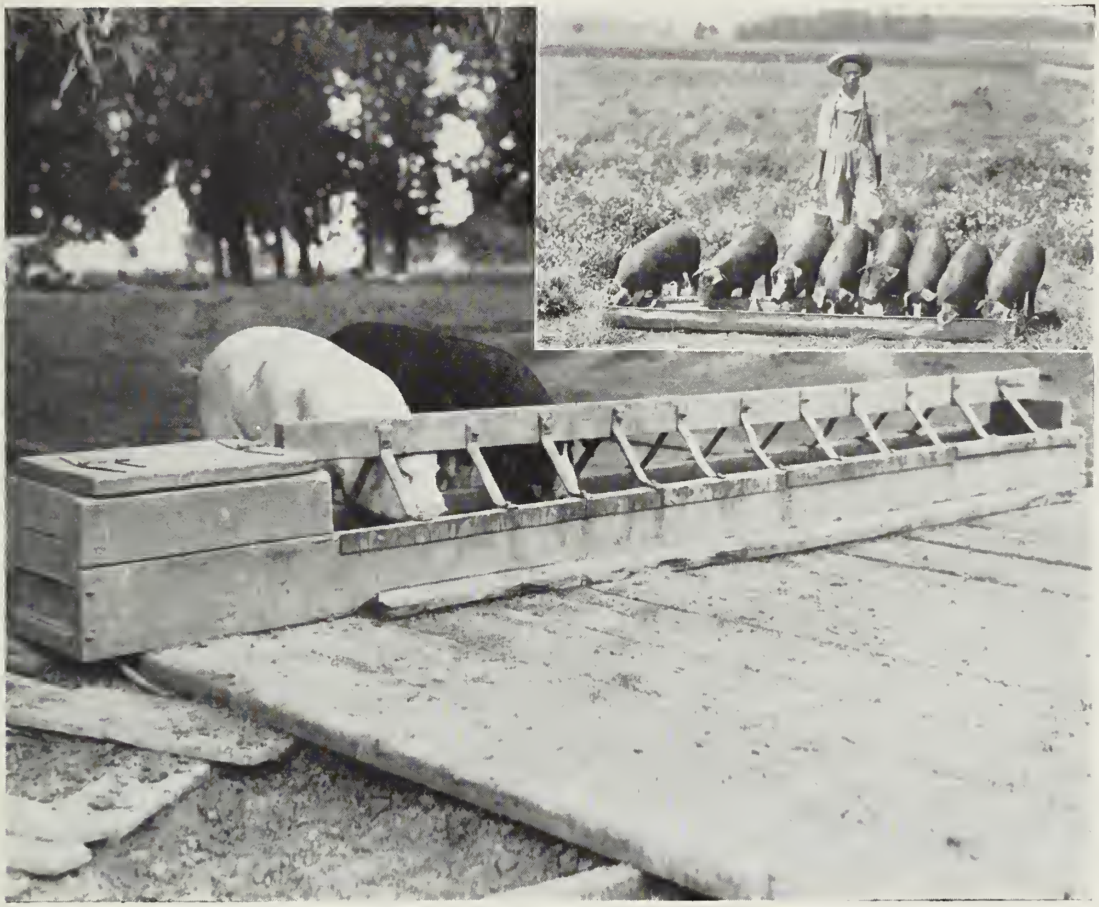

Labor-saving methods and devices lead to increased wartime production. This homemade waterer, which may be attached to a pressure system or to a tank wagon, is float controlled, requires little attention and provides fresh water at all times. Moreover, it is mudhole proof. Upper right — the hard way.

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FARMING-TYPE AREA FOUR
East Central Cash Grain Area

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Annual Farm Business Report

ON FIVE HUNDRED THIRTY-EIGHT FARMS IN FARMING-TYPE AREA 4, 1943

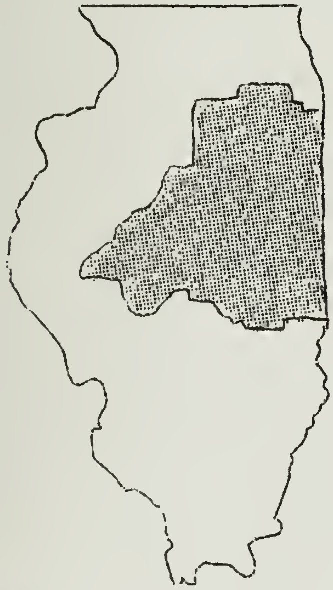
By J. B. Cunningham, E. N. Searls, and J. A. Snyder[1]

Production. Among the 538 accounting farmers in Farming-Type Area 4 were 399 farmers who operated the same farms in 1943 as in 1942. These 399 farmers attempted to step-up production in 1943 over that of 1942 by increasing grain acreage, number of pigs, and number of hens.

TABLE 1.--PRODUCTION CHANGES ON THE SAME FARMS, AREA 4

			Change	
Item	1942	1943	Actual	Per Cent
Acres	252	252	0	0
Acres of grain crops	170	178	8	5
Number of cows milked	6	6	0	0
Number of pigs weaned	104	117	13	12
Number of hens	120	126	6	5
Total months of labor	21.9	22.4	.5	2
Value of machinery (beginning of year)	$2 301	$2 631	$330	14
Tons of grain produced	200	192	-8	-4
Value of production of livestock and livestock products[a] - total	$5 682	$5 305	-$377	-7
Beef cattle	1 476	1 196	-280	-19
Dairy sales	587	561	-26	-4
Hogs	3 077	2 996	-81	-3
Sheep	81	61	-20	-25
Poultry and eggs	461	491	30	6

[a] 1943 values adjusted to 1942 price level.



▨ Farming-Type Area 4
Cash Grain

Slightly more labor was used in 1943 than in 1942. About two-thirds of the total months of labor was operator's and family labor and one-third was hired labor.

Increased machinery and equipment investments at the beginning of 1943 reflect 1942 purchases of livestock equipment rather than large purchases of tillage tools.

The decreased grain production was the result of smaller yields per acre of corn, soybeans, and oats. Livestock production for 1943, as measured by receipts and net increases adjusted to 1942 prices, showed decreases for all classes except poultry, with the major money decrease in beef cattle.

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[1] The farm account project was conducted in cooperation with the county farm bureaus and was supervised by the following farm advisers: J. E. Harris, Champaign; H. D. Triplett, Ford; H. D. VanMatre, Iroquois; Edwin Bay, Sangamon; I. E. Parett, Vermilion; G. T. Swaim, Kankakee; L. W. Braham, Will; Paul M. Krows, Moultrie; J. R. Gilkey, Macon; R. V. Watson, Mason; N. H. Anderson, Logan, H. N. Myers, DeWitt; W. P. Miller, Kendall; L. W. Chalcraft, Menard; G. H. Husted, Cass; L. E. McKinzie, Edgar; J. Q. Scott, Douglas; E. O. Johnston, Piatt; and W. S. Myers, Coles.

TABLE 2.--INVENTORY CHANGES, CASH INCOME, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 4, 1940-1943

Item	Your farm	Average of all farms in area			
		1943	1942	1941	1940
Number of farms- - - - - - - - - - -	--	583	663	703	582
Acres per farm - - - - - - - - - - -		258	259	265	271
Inventory Changes					
Land improvements- - - - - - - - -	$	$ 93	$ 63	$) 76	$) 83
Farm buildings - - - - - - - - - -		30	8	)	)
Horses - - - - - - - - - - - - - -		-28	-15	-38	-54
Productive livestock - - - - - - -		-91	1 067	835	324
Feed, grain, and seeds - - - - - -		746	458	1 416	-104
Machinery and equipment- - - - - -		-26	190	261	104
Automobile (farm share)- - - - - -		-36	-27	29	15
Total- - - - - - - - - - - - - - -	$	$ 688	$ 1 744	$ 2 579	$ 368
Cash Receipts					
Land improvements- - - - - - - - -	$	$ 2	$ 1	$) 9	$) 17
Farm buildings - - - - - - - - - -		17	15	)	)
Horses - - - - - - - - - - - - - -		51	47	40	47
Productive livestock: Cattle - -		2 798	2 258	1 762	1 624
Dairy sales		702	700	553	418
Hogs - - -		3 196	2 826	1 701	1 012
Sheep- - -		142	159	128	88
Poultry- -		253	194	149	111
Egg sales-		410	331	225	156
Total productive livestock - - -	( )	(7 501)	(6 468)	(4 518)	(3 409)
Feed, grain, and seeds - - - - - -		5 857	4 622	3 571	2 801
Machinery and equipment- - - - - -		283	285	311	291
Automobile (farm share)- - - - - -		17	17	61	52
AAA receipts - - - - - - - - - - -		490	523	525	577
Labor off farm - - - - - - - - - -		46	35	39	40
Miscellaneous- - - - - - - - - - -		12	6	10	9
Total- - - - - - - - - - - - - - -	$	$14 276	$12 019	$ 9 084	$ 7 243
Cash Expenses					
Land improvements- - - - - - - - -	$	$ 269	$ 218	$) 398	$) 383
Farm buildings - - - - - - - - - -		343	321	)	)
Horses - - - - - - - - - - - - - -		37	34	22	22
Productive livestock: Cattle - -		1 172	1 297	890	873
Hogs - - -		229	223	129	87
Sheep- - -		71	59	68	56
Poultry- -		68	53	39	30
Total productive livestock - - -	( )	(1 540)	(1 632)	(1 126)	(1 046)
Feed and grain purchases - - - -		1 624	1 173	804	530
Crop and sealing expense - - - -		323	272	175	172
Machinery and equipment- - - - -		1 472	1 574	1 402	1 122
Automobile (farm share)- - - - -		161	151	227	189
Livestock expense- - - - - - - -		102	91	65	52
Hired labor- - - - - - - - - - -		738	584	486	436
Taxes- - - - - - - - - - - - - -		417	395	398	397
Miscellaneous- - - - - - - - - -		45	43	34	30
Total- - - - - - - - - - - - - - -	$	$ 7 071	$ 6 488	$ 5 137	$ 4 379
Summary					
Total inventory change - - - - -	$	$ 688	$ 1 744	$ 2 579	$ 368
Cash balance - - - - - - - - - - -		7 205	5 531	3 947	2 864
Farm products used in household-		371	325	273	225
Receipts less expenses - - - - -	$	$ 8 264	$ 7 600	$ 6 799	$ 3 457

TABLE 3.--INVESTMENTS AND EARNINGS
Accounting Farms in Farming-Type Area 4, 1940-1943

Item	Your farm	Average of all farms in area			
		1943	1942	1941	1940
Capital Investments					
Land	$	$28 927	$28 442	$28 998	$29 028
Land improvements		780	725	4 334	4 353
Farm buildings		3 866	4 048		
Horses		223	222	268	345
Productive livestock: Cattle		2 501	2 012	1 704	1 561
Hogs		1 247	823	478	463
Sheep		115	123	92	77
Poultry		155	137	104	99
Total productive livestock	( )	(4 018)	(3 095)	(2 378)	(2 200)
Feed, grain, and seeds		4 688	4 446	3 334	3 776
Machinery and equipment		2 657	2 576	2 327	2 249
Automobile (farm share)		327	300	226	205
Total	$	$45 486	$43 854	$41 865	$42 156
Earnings					
Receipts less expenses	$	$ 8 264	$ 7 600	$ 6 799	$ 3 457
Family labor		344	252	189	153
Returns for labor, capital, mgt.	$	$ 7 920	$ 7 348	$ 6 610	$ 3 304
Operator's labor		1 015	771	596	543
Net earnings per farm	$	$ 6 905	$ 6 577	$ 6 014	$ 2 761
Net Earnings per Acre		26.72	25.39	22.69	10.19
Rate Earned on Investment	%	15.2%	15.0%	14.4%	6.5%
Interest on investment	$	$ 2 274	$ 2 193	$ 2 093	$ 2 108
Labor and Management Earnings		5 646	5 155	4 517	1 196

Net earnings. The net earnings per farm on an inventory basis were higher in 1943 than in 1942; the average was $6,905 in 1943 compared with $6,577 in 1942. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. It is calculated by adding to the cash balance the value of farm products used in the household and the inventory increases and by subtracting from the resulting total the value of unpaid labor. The average net earnings per acre were $26.72 in 1943, $25.39 in 1942, $22.69 in 1941, and $10.19 in 1940.

Inventory changes. The year 1943 was the eleventh consecutive year in which inventories increased. The largest increase during the past four years was $2,579 in 1941, and the smallest was $368 in 1940 (Table 2). In 1943 the largest money increases were for livestock and feed, grain, and seeds. The average amounts of grain on hand in Area 4 at the two inventory periods were:

Crop	Beginning of year (bushels)	End of year (bushels)
Corn	4,027	3,901
Oats	841	634
Wheat	36	18
Soybeans	323	228

Cash receipts and cash expenses. In 1943 cash receipts exceeded cash expenses by $7,205, the largest margin for any year during the past four. The cash balance--the difference between cash receipts and expenses--is the amount of money which was available for family living expenses, interest, debt payments, and savings.

TABLE 4.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 4, 1943

Item	Your farm	Standards for your farm	Average of 538 farms
Rate earned on investment	%	15.2%	15.2%
Acres in farm		e/	258
Acres in crops			200
Gross earnings per acre	$	$ a/	$ 44.29
Gross expenses per acre			17.57
Investments			
Value of land per acre	$	$ $112	$ 112
Value of improved land per acre		a/	116
Value of buildings per acre		e/	15
Total investment per acre		176	176
Land Use			
Percent of land area tillable		a/	90.1
Percent of tillable land in:			
Corn			35.4
Oats			13.5
Wheat			4.5
Soybeans			23.4
Other crops			2.5
Legume hay and pasture			12.1
Nonlegume hay and pasture			8.6
Crop Yields			
Corn, bu.		b/	58.5
Oats, bu.			35.6
Wheat, bu.			17.2
Soybeans, bu.			23.4
Livestock Factors			
Value of feed fed to prod. l.s.	$	$4 446	$4 446
Feed fed per acre to prod. l.s.		c/	17.21
Returns per $100 worth of feed fed			139
Poultry returns per hen		5.41	5.41
Number of litters farrowed		18.0	18.0
Number of pigs weaned per litter		6.2	6.2
Returns per litter farrowed	$	$ c/	$ 183
Average number of cows milked		5.9	5.9
Dairy returns per cow milked	$	$ c/	$ 138
Labor Factors			
Labor cost per crop acre	$	$ d/	$ 10.24
Labor units on crops		e/	26.1
Labor units on livestock			15.4
Total labor units			41.5
Total months of labor			22.7
Labor units per worker			22.0
Other Expense Factors			
Horse and machinery cost per crop acre	$	$ d/	$ 7.70
Land improvements cost per acre		.67	.67
Buildings cost per acre		e/	1.15
Land tax per acre		a/	1.38

a/ Table 5, value of improved land
b/ Fig. 1, value of improved land
c/ Table 7, source of income
d/ Table 9, size of farm and value of feed fed per acre
e/ Table 8, size of farm

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS

Accounting Farms in Farming-Type Area 4, 1943

The numbers above the double line are the averages for the farms similar in organization to your farm. By drawing a line across each column at the place which measures the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

			Factors that affect the gross earnings										Factors that affect expenses		
				Crop yields											
Rate earned on investment, percent	Acres in farm	Gross earnings per acre	Percent of tillable land in legume hay and pasture	Corn, bu.	Oats, bu.	Soybeans, bu.	Feed fed per acre to prod. l.s.	Returns per $100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked	Gross expense per acre	Horse and machinery cost per crop acre	Labor cost per crop acre	Buildings cost per acre
25.2									7.91						
23.2									7.41						
21.2									6.91						
19.2									6.41						
17.2									5.91						
15.2									5.41						
13.2									4.91						
11.2									4.41						
9.2									3.91						
7.2									3.41						
5.2									2.91						
* 2%	20	$4	2%	5 bu.	5 bu.	3 bu.	$2	$15	$.50	$15	$10	$2	$1	$1	$.30

*Each space between lines represents the value indicated at bottom of each column.

TABLE 5.--USE OF TILLABLE LAND AND OTHER FACTORS RELATED TO THE VALUE OF IMPROVED LAND
Accounting Farms in Farming-Type Area 4, 1943

Item	Value of improved land					
	Less than $63	$63 to $82	$83 to $102	$103 to $122	$123 to $142	$143 or more
Average value of improved land- -	$47	$75	$95	$114	$130	$155
Number of farms - - - - - - - - - -	26	50	122	78	156	106
Acres per farm- - - - - - - - - - -	286	272	248	253	270	244
Percent of land area tillable - -	82.2	81.5	88.0	91.1	92.6	94.4
Percent of tillable land in:						
Corn- - - - - - - - - - - - - - -	26.5	32.9	35.2	37.2	36.2	36.5
Oats- - - - - - - - - - - - - - -	6.4	14.4	13.8	14.2	13.8	13.3
Wheat - - - - - - - - - - - - - -	15.5	6.5	4.4	2.9	4.2	2.6
Soybeans- - - - - - - - - - - - -	13.4	17.3	21.4	24.1	24.7	28.3
Other crops - - - - - - - - - - -	13.5	3.6	3.2	1.5	1.5	1.4
Legume hay and pasture- - - - -	17.8	14.6	13.0	11.3	11.5	10.0
Nonlegume hay and pasture - - -	6.9	10.7	9.0	8.8	8.1	7.9
Gross earnings per acre[1] - - - -	$25.09	$35.52	$42.38	$ 44.53	$ 48.10	$50.30
Gross expenses per acre[1] - - - -	12.60	15.97	17.92	18.09	17.99	18.33
Net earnings per acre - - - - - -	$12.49	$19.55	$24.46	$ 26.44	$ 30.11	$31.97
Land tax per acre - - - - - - - -	$ .80	$ 1.07	$ 1.36	$ 1.43	$ 1.47	$ 1.56

[1] Used in Table 4.

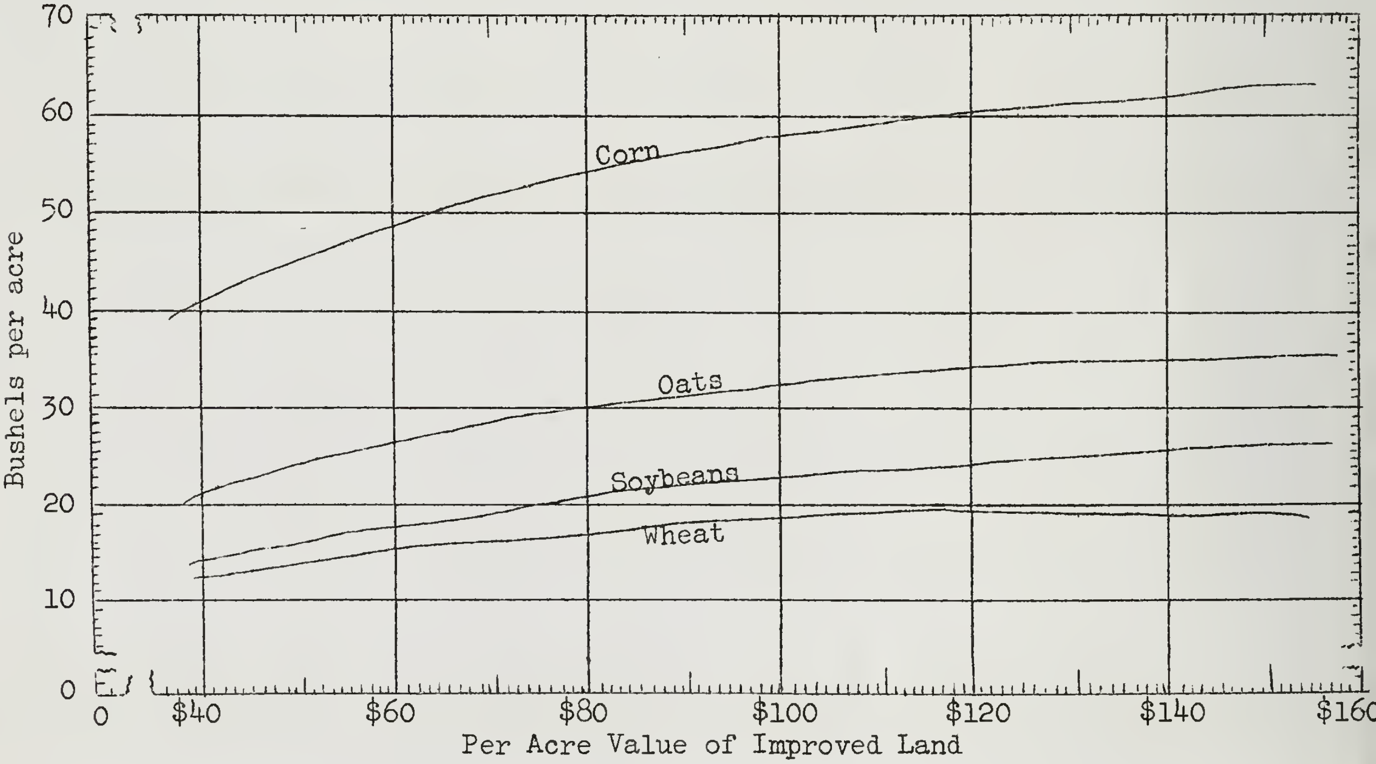

Fig. 1.--Average Yields of Corn, Oats, Wheat and Soybeans with Varying Values of Improved Land

Unpaid family labor. The total valuation of unpaid labor was higher for 1943 than for any other year in the past four. This increase resulted principally from the fact that the physical labor of the operator and other members of the family was valued at prevailing farm wages in Area 4, which were approximately $90 per month in 1943, $70 per month in 1942, $55 per month in 1941, and $50 per month in 1940.

Variation in farm earnings. A wide variation was found in earnings on the farms in Area 4. For example, 69 farms earned less than nine percent on their investment but 72 farms earned 21 percent or more (Table 6). After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had $1,429 for their labor and management earnings contrasted with $9,323 for the latter group.

Table 6.--Variation in 1943 Earnings, 538 Accounting Farms in Area 4

Rate earned on investment	Number of farms	Average rate earned	Acres per farm	Capital invested per farm	Gross earnings per farm	Net earnings per farm	Labor and management earnings
(percent)		(percent)					
Less than 9.00	69	6.1	233	$41,725	$ 7,885	$2,537	$1,429
9.00 to 12.99	125	11.1	237	44,338	10,019	4,933	3,730
13.00 to 16.99	147	15.0	268	47,126	12,043	7,072	5,758
17.00 to 20.99	125	18.9	270	47,722	13,569	9,035	7,640
21.00 or more	72	23.9	280	43,851	15,103	10,479	9,323

Explanation of Tables

Variable standards are used in analyzing the farm business (Table 4). They make allowances for the following facts: (1) that the quality of land affects the cropping system and the crop yields; (2) that the kind of livestock influences the amount of feed fed and the returns per $100 worth of feed fed; (3) that the size and intensity of the farm business affects practically all the cost items; and (4) that price relationships and quantities of the products produced affect the relative profitableness of various types of farming for any particular year.

The terms used in the tables are the same as the terms used in the Illinois farm account book. For example, "improved land" is classified on Page 1 of the farm account book. It means crop land, tillable pasture, and land occupied by farmstead, roads, and lanes. Likewise, "crop acres" are listed on page 20 of the farm account book. They include all the tillable land on which a large amount of work has been done in preparing a seedbed or in cultivating or harvesting a crop.

(Note: A labor unit is explained on page 12.)

Land Use and Crop Yields

The percent of tillable land in grain crops increased as the value per acre for improved land increased (Table 5). Likewise, the earnings per acre and the land tax per acre increased as the value of improved land increased. On the other hand, the percent of tillable land in other crops and legume and nonlegume hay and pasture decreased as the value of the land increased.

Yields per acre for corn, oats, wheat and soybeans tended to increase as the land value increased (Fig. 1). By using Table 5 and Figure 1, the account keeper may find out whether his acreage in various crops, crop yields, and earnings per acre were high or low in comparison with the average of other farms in his area having about the same value of improved land.

TABLE 7.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 4, 1943

Item	Source of Income					
		Dairy		Beef	General	farms
	Grain 40%+	sales 40%+	Hogs 40%+	cattle 40%+	L.S. 60%-	L.S. 60%+
Number of farms - - - - - - - - -	306	15	98	15	50	54
Percent of income from prod. l.s.	31.7	80.6	92.2	93.3	53.5	74.8
Percent of income from crops- -	60.5	11.8	--	--	35.6	16.8
Investments						
Total per farm- - - - - - - -	$48 390	$31 157	$44 086	$76 310	$35 391	$36 332
Total per acre- - - - - - - -	174	172	180	219	163	175
Land per acre - - - - - - - -	118	97	103	114	102	102
Land improvements per acre- -	2.65	2.08	3.85	3.55	3.08	3.94
Buildings per acre- - - - - -	13.63	23.24	17.34	16.28	13.53	18.74
Machinery per acre- - - - - -	11.23	14.02	12.05	10.80	11.83	12.37
Earnings						
Per farm						
Gross earnings- - - - - - -	$12 284	$ 7 679	$11 273	$17 718	$ 9 388	$ 8 805
Gross expenses- - - - - - -	4 569	4 392	4 780	8 466	3 867	4 103
Net earnings- - - - - - - -	$ 7 715	$ 3 287	$ 6 493	$ 9 252	$ 5 521	$ 4 702
Net earnings per acre - - - -	27.78	18.19	26.45	26.61	25.42	22.67
Rate earned on investment - -	15.9%	10.5%	14.7%	12.1%	15.6%	12.9%
Labor and management earnings	$ 6 289	$ 2 873	$ 5 318	$ 6 499	$ 4 786	$ 3 928
Size and Intensity						
Acres per farm- - - - - - - -	278	181	246	348	217	207
Percent of land area tillable	92.0	83.4	85.4	88.2	91.0	87.2
Percent tillable land in grain	80.1	66.9	72.3	71.7	74.5	70.2
Percent in hay and pasture- -	17.7	29.6	25.0	27.4	23.4	27.9
Feed fed per acre to prod. l.s.[1]	$ 10.47	$ 23.19	$ 32.62	$ 41.68	$ 16.90	$ 22.63
Months of labor per 100 crop A.	10.0	20.1	14.0	12.2	12.1	14.1
Total months of labor - - - -	22.5	24.7	24.1	31.4	20.2	21.1
Crop Yields Per Acre						
Corn, bu. - - - - - - - - - - -	58.2	57.4	60.7	60.9	57.7	55.1
Soybeans, bu. - - - - - - - - -	23.7	18.2	23.2	24.1	22.5	21.3
Livestock Returns						
Per $100 feed fed[1] - - - - -	$ 144	$ 154	$ 134	$ 117	$ 146	$ 147
Hog returns per litter[1] - - -	171	151	193	200	188	180
Dairy returns per cow[1] - - -	123	233	128	137	124	153
Labor Factors						
Labor cost per crop acre- - -	$ 8.94	$ 18.72	$ 12.81	$ 10.86	$ 11.00	$ 12.85
Labor units on crops- - - - -	29.6	15.3	22.5	32.8	21.1	18.8
Labor units on livestock- - -	12.2	22.4	21.7	24.6	14.8	18.3
Total labor units - - - - -	41.8	37.7	44.2	57.4	35.9	37.1
Labor units per worker- - - -	22.2	18.3	22.0	21.9	21.4	21.1
Other Expense Factors						
Horse and machinery cost per crop acre - - - - - - - - - -	$ 7.10	$ 11.17	$ 9.04	$ 8.56	$ 7.49	$ 9.07
Land improvements cost per acre	.61	.70	.77	.73	.72	.83
Buildings cost per acre - - -	1.02	1.53	1.40	1.54	1.07	1.36
Land tax per acre - - - - - -	1.44	1.26	1.28	1.30	1.33	1.28

[1] Used in Table 4.

Source of Income

The grouping of accounting farms according to source of income gives each farmer an opportunity to compare his farm with the average of other farms having similar sources of income. It also gives him an opportunity to study investments, land use, crop yields, labor requirements, horse and machinery requirements, and other factors that are associated with various types of farming.

Interpretation of table. Each farmer should, however, use caution in interpreting the data in Table 7. For example, the fact that grain farms earned 15.9 percent on the investment for 1943 and dairy farms earned 10.5 percent does not mean that such a relationship will prevail over a long period of years. The relative profitableness of enterprises is due largely to conditions affecting price and production.

In comparing the returns on the various groups of farms per $100 worth of feed fed, one should consider the fact that there is a wide varation in the needed returns per $100 worth of feed fed to pay for feed (including pasture), labor, equipment, buildings, and other costs. According to 3-year averages of complete cost studies (1940-1942), the necessary returns were: poultry, $181; dairy cattle, $188; hogs, $135 and feeder cattle $119.

Furthermore, in a comparison of crop yields for the various types of farming, the following items, which indicate that the grain farms were located on the better land, should be noted: (1) high value of land per acre; (2) large percent of land area tillable; (3) large percent of land in grain; and (4) high land tax per acre.

Labor. Labor cost per crop acre varied from $8.94 on the grain farms to $18.72 on the dairy farms; whereas, labor units per worker varied from 22.2 units on the grain farms to 18.3 on the dairy farms. Variation between groups was greated in labor units on crops than in labor units on livestock.

Labor input per 100 crop acres was lowest on the grain farms, where 10.0 months of labor per 100 acres were used, and highest on the dairy farms were 20.1 months of labor were used. Two-man size farms predominated in the various groups, total months of labor varying from 20.2 on the general farms with the least livestock to 31.4 months on the beef cattle farms.

Other expense factors. Horse and machinery cost per crop acre was highest on the dairy farms where it averaged $11.17; land improvement cost per acre was highest on the general farms with the most livestock where it averaged $.83; and buildings cost per acre was highest on the beef cattle farms where it averaged $1.54. All of the foregoing expense items were lowest on the grain farms.

Size of Farm

When average farm earnings are above the capitalization rate (5 percent is the usual rate used), large farms usually show higher labor and management earnings than small farms. Conversely, when average farm earnings are below the capitalization rate, large farms show a greater loss. In 1943, with farm earnings averaging 15.2 percent in Area 4, the labor and management earnings on the 44 largest farms averaged $10,626 contrasted with $2,370 on the 44 smallest farms.

The rate earned on investment did not differ significantly for the size groups averaging more than 200 acres.

TABLE 8.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 4, 1943

Item	Total acres in farm					
	Less than 121	121 to 200	201 to 280	281 to 360	361 to 440	441 or more
Number of farms	44	162	166	85	37	44
Acres in farm 1/	109	168	241	321	401	566
Acres in crops 1/	82	131	189	255	314	413
Investments						
Total per farm	$20 672	$31 558	$42 267	$54 990	$72 735	$92 446
Total per acre	190	188	175	171	181	163
Land improvements per acre	4.08	3.54	2.83	2.57	3.08	3.01
Buildings per acre 1/	20.46	17.87	15.84	13.96	13.48	11.29
Machinery per acre	15.80	13.37	11.75	11.10	11.15	9.14
Earnings						
Per farm						
Gross earnings	$ 5 228	$ 8 084	$10 747	$14 087	$17 519	$22 452
Gross expenses	2 812	3 572	4 219	5 196	6 358	8 242
Net earnings	$ 2 416	$ 4 512	$ 6 528	$ 8 891	$11 161	$14 210
Net earnings per acre	22.21	26.86	27.09	27.72	27.83	25.12
Rate earned on investment	11.7%	14.3%	15.4%	16.2%	15.3%	15.4%
Labor and management earnings	$ 2 370	$ 3 954	$ 5 452	$ 7 114	$ 8 523	$10 626
Size and Intensity						
Percent of land area tillable	90.0	92.0	90.9	90.4	91.1	85.7
Percent tillable land in grain	73.1	75.2	78.0	79.3	77.5	75.6
Percent in hay and pasture	26.6	23.1	19.8	19.0	20.0	20.8
Feed fed per acre to prod. l.s.	$ 26.64	$ 19.93	$ 16.42	$ 14.76	$ 14.56	$ 17.94
Percent of income from prod. l.s.	74.2	57.6	49.4	44.1	44.9	53.9
Percent of income from crops	15.7	33.9	42.4	47.9	48.0	38.8
Months of labor per 100 crop A.	19.6	14.3	11.3	10.0	9.4	9.2
Total months of labor 1/	16.2	18.8	21.4	25.4	29.3	38.2
Crop Yields per Acre						
Corn, bu.	58.9	59.7	57.5	58.5	57.7	59.0
Soybeans, bu.	23.5	23.2	23.1	23.2	23.9	24.0
Livestock Returns						
Per $100 feed fed	$ 143	$ 147	$ 142	$ 138	$ 140	$ 123
Hog returns per litter	184	179	176	186	185	196
Dairy returns per cow	143	158	133	122	124	124
Labor Factors						
Labor cost per crop acre	$ 17.78	$ 12.67	$ 10.05	$ 9.12	$ 8.76	$ 8.48
Labor units on crops 1/	10.5	17.1	24.9	33.2	40.8	53.6
Labor units on livestock 1/	11.5	13.6	14.8	16.5	18.6	23.8
Total labor units 1/	22.0	30.7	39.7	49.7	59.4	77.4
Labor units per worker 1/	16.3	19.6	22.3	23.4	24.4	24.3
Other Expense Factors						
Horse and machinery cost per crop acre	$ 10.55	$ 8.96	$ 7.74	$ 7.07	$ 7.27	$ 6.63
Land improvements cost per acre	.81	.80	.54	.65	.60	.79
Buildings cost per acre 1/	1.65	1.40	1.08	.98	1.10	1.08
Land tax per acre	1.46	1.47	1.41	1.38	1.30	1.28

1/ Used in Table 4.

Intensity. The smaller farms were operated more intensively than were the larger ones. This variation was indicated by the larger amount of feed fed per acre to productive livestock, and by more months of labor per 100 crop acres.

Labor. As the size of the farms increased from less than 121 acres to 441 acres or more, the labor cost per crop acre decreased from $17.78 to $8.48. On the other hand, labor units on crops increased from 10.5 to 53.6; labor units on livestock increased from 11.5 to 23.8; total labor units increased from 22.0 to 77.4; and labor units per worker increased from 16.3 to 24.3.

Other expense items. Expense per crop acre from the smallest to the largest size group decreased for horses and machinery from $10.55 to $6.63; for buildings from $1.65 to $1.08 and for land taxes from $1.46 to $1.28.

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Labor and Horse and Machinery Expenses

Labor and horse and machinery expenses per crop acre increase as the amount of livestock per acre increases, but decrease as the size of farm increases. Therefore the efficiency of a farm in using labor and machinery should be determined by comparing the expenses on the individual farm with those of other farms of the same size having similar amounts of livestock per acre. The average labor cost per crop acre and the average horse and machinery cost per crop acre are shown for farms grouped according to acres per farm and value of feed fed per acre to productive livestock (Table 9).

TABLE 9.--LABOR COST PER CROP ACRE AND HORSE AND MACHINERY COST PER CROP ACRE FOR VARIATIONS IN SIZE OF FARM AND AMOUNT OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK
Accounting Farms in Farming-Type Area 4, 1943

Acres per farm	Feed fed per acre				Feed fed per acre			
	Less than $11.00	$11.00 to $17.99	$18.00 to $24.99	$25.00 or more	Less than $11.00	$11.00 to $17.99	$18.00 to $24.99	$25.00 or more
	(labor cost per crop acre)				(horse and machinery cost per crop acre)			
Less than 121	$11.85	$16.09	$17.41	$22.09	$ 9.19	$10.27	$10.47	$11.35
121 to 200	10.50	11.36	13.51	16.43	7.95	8.59	9.41	10.90
201 to 280	9.26	9.77	10.72	13.30	6.98	7.69	8.10	9.36
281 to 360	8.38	9.29	10.58	11.00	6.62	6.94	7.95	9.00
361 to 440	8.00	8.49	9.49	10.59	6.87	7.00	7.23	8.11
441 or more	6.79	8.00	9.00	10.43	5.36	6.24	7.00	7.27

Supplementary Labor Analysis

Labor units are used in this report to supplement the foregoing measures of labor efficiency.

A labor unit is essentially the same as a war unit. It is the approximate amount of time under average conditions that is required to take care of a dairy cow for one year or to do an equivalent amount of work with other livestock or crops. For example, the labor unit assumes that one dairy cow requires about as much work as 5.5 acres of corn, 8.3 acres of soybeans for grain, 14.3 acres of small grain or hay, 10 beef cows, 20 feeder cattle, 3 litters of pigs, 33 sheep, 160 feeder lambs, or 77 hens.

Obviously, no other computation of work units for the individual farmer will agree with those written in this report unless the acres and classification of crops as well as the numbers and kinds of livestock are the same as those recorded in the farm account book.

Labor Saving References

Labor simplification is suggested by the picture on the front cover of this report. For additional suggestions, ideas, and plans see your farm adviser or write directly to the University of Illinois, for the following publications:

Department of Agricultural Economics

"Making Your Labor Go Further," mimeograph AE-2182
"Feeding Cattle With Less Labor," AE-2169
"Making the Most of Available Labor," AE-2001

Emergency Farm Labor Office

"Making Food With Less Labor," printed leaflet

Department of Agricultural Engineering

"Hog Equipment," Circular 554
In addition, the Department of Agricultural Engineering supplies lists from which plans for labor saving devices, equipment, and structures may be selected.

Producing for War Needs

The account keeper should use the standards in this report to compare his own production with that of other account keepers. He should then adopt on his farm the kind of farm plan and the management practices that will make the best possible use of land, buildings, livestock, labor, machinery, and other resources for the duration of the war. Thus he will have more products to put on the nation's markets and so will be making the greatest possible contribution to the war effort.

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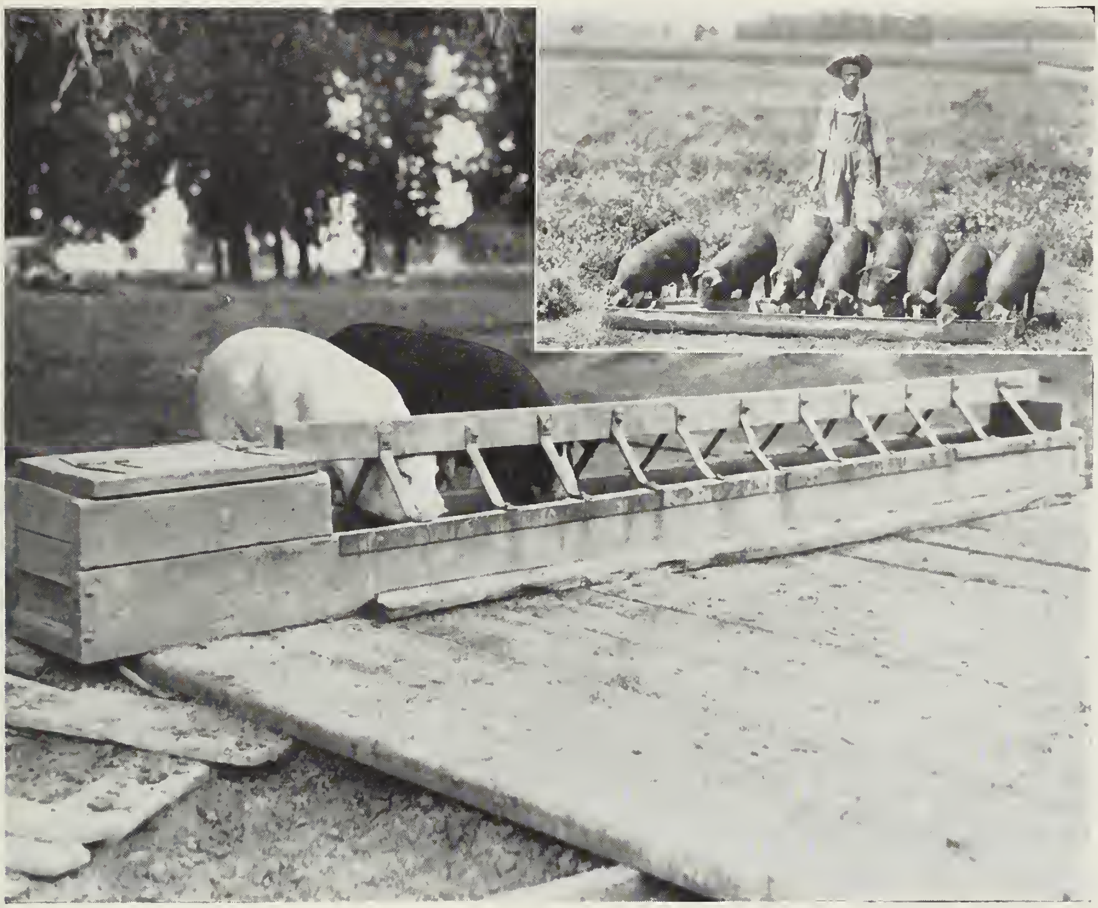
FARM BUSINESS REPORT . . . 1943



Labor-saving methods and devices lead to increased wartime production. This homemade waterer, which may be attached to a pressure system or to a tank wagon, is float controlled, requires little attention and provides fresh water at all times. Moreover, it is mudhole proof. Upper right—the hard way.

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FARMING-TYPE AREA FIVE
West Central General Farming Area

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

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Annual Farm Business Report

ON TWO HUNDRED NINETY-ONE FARMS IN FARMING-TYPE AREA 5, 1943

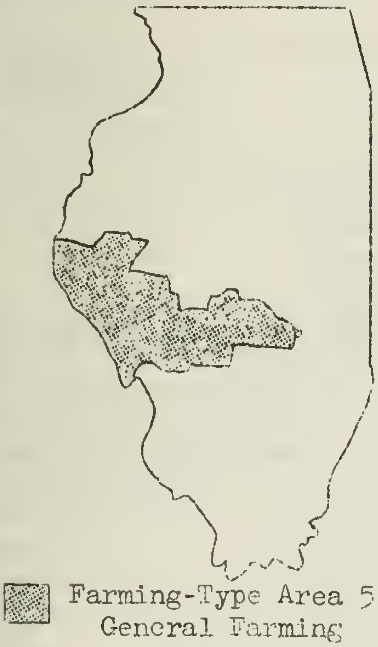
By J. B. Cunningham, E. N. Searls and R. J. Mutti[1]

Production changes. Of the 291 accounting farmers in Farming-type Area 5, 256 operated the same farms in 1942. These 256 identical farmers stepped-up production in 1943 over that of 1942 by increasing acres operated, acres of grain and tons of grain produced, and numbers of pigs and hens.

Table 1.--Selected Factors of Production and Changes on 256 Identical Farms, Area 5

Item (Average per farm)	1942	1943	Change	
			Actual	Per Cent
Acres	251	255	+ 4	+ 1.6
Acres of grain crops	123	136	+ 13	+10.5
Number of cows milked	7	7	0	0
Number of pigs weaned	131	133	+ 2	+ 1.5
Number of hens	114	126	+ 12	+10.5
Total months of labor	23.3	23.7	+ .4	+ 1.7
Value of machinery (beginning of year)	$2 065	$2 257	+$192	+ 9.3
Tons of grain produced	122.1	133.0	+ 10.9	+ 8.9
Value of production of livestock and livestock products[a] - total	$7 554	$7 083	-$471	- 6.2
Beef cattle	1 851	1 560	- 291	-15.7
Dairy sales	818	805	- 13	- 1.6
Hogs	4 367	4 219	- 148	- 3.4
Sheep	108	80	- 28	-26.0
Poultry and eggs	410	419	+ 9	+ 2.2

[a] 1943 values adjusted to 1942 price level.



The increased grain production came from larger acreages of soybeans, corn and wheat. Oats production was decreased by 14 per cent. Livestock production for 1943, as measured by receipts and net increases adjusted to 1942 price levels, showed decreases for all classes except poultry, with the major decrease in beef cattle.

Increased machinery and equipment investments at the beginning of 1943 reflect 1942 purchases of movable hog houses, brooder houses, and other livestock equipment rather than large purchases of tillage tools.

The slight increase in labor was in operator's and family labor, which averaged 67 per cent of the total months of labor used on the accounting farms in Area 5 in 1943.

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[1] J. A. Snyder supervised the closing of the farm accounts and the preparation of the tables used in the report. The project was conducted in cooperation with the county farm bureaus and was supervised by the following farm advisers: G. B. Whitman (S. E. Meyers since March 1, 1944), Adams; C. S. Love, Christian; W. S. Batson, Shelby; W. F. Coolidge, Morgan; O. O. Mowery, Macoupin; W. B. Bunn, Pike; C. T. Kibler, Jersey; A. C. Snyder, Montgomery; Ray H. Roll, Greene; E. H. Garlich, Brown; R. K. Wise, Schuyler; and G. H. Reid, Scott.

TABLE 2.--INVENTORY CHANGES, CASH RECEIPTS, CASH EXPENSES, AND SUMMARY
Accounting Farms in Farming-Type Area 5, 1940-1943

Item	Your farm	Average of all farms in area			
		1943	1942	1941	1940
nventory Changes					
Land improvements	$	$ 34	$ 52	$) 75	$ 118
Farm buildings		-37	7	)	
Horses		-21	-4	-36	-38
Productive livestock		78	844	966	381
Feed, grain, and seeds		709	188	940	301
Machinery and equipment		-1	159	261	87
Automobile (farm share)		-32	-22	35	21
Total	$	$ 730	$ 1 224	$ 2 241	$ 870
ash Receipts					
Land improvements	$	$ 1	$ 4	$) 6	$ 10
Farm buildings		7	6	)	
Horses		42	48	40	43
Productive livestock: Cattle		3 284	2 941	2 225	1 782
Dairy sales		986	793	689	522
Hogs		4 640	3 994	2 448	1 455
Sheep		140	185	190	124
Poultry		174	129	110	81
Egg sales		375	259	178	116
Total productive livestock	( )	(9 599)	(8 301)	(5 840)	(4 080)
Feed, grain, and seeds		3 175	2 332	1 766	1 264
Machinery and equipment		257	270	281	249
Automobile (farm share)		20	23	61	48
AAA receipts		457	331	333	426
Labor off farm		37	35	39	43
Miscellaneous		9	6	10	13
Total	$	$13 604	$11 356	$ 8 376	$ 6 176
Cash Expenses					
Land improvements	$	$ 218	$ 208	$) 367	$ 368
Farm buildings		234	258	)	
Horses		33	45	27	23
Productive livestock: Cattle		1 467	1 523	1 202	978
Hogs		470	373	233	149
Sheep		43	65	88	56
Poultry		50	36	27	20
Total productive livestock	( )	(2 030	(1 997)	(1 550)	(1 203)
Feed and grain purchases		2 772	1 831	1 174	726
Crop and sealing expense		288	236	142	124
Machinery and equipment		1 285	1 255	1 158	857
Automobile (farm share)		151	142	209	167
Livestock expense		104	92	70	54
Hired labor		649	529	421	370
Taxes		350	316	296	294
Miscellaneous		40	35	34	25
Total	$	$ 8 127	$ 6 944	$ 5 448	$ 4 211
Summary					
Total inventory change	$	$ 730	$ 1 224	$ 2 241	$ 870
Cash balance		5 477	4 412	2 928	1 965
Farm products used in household		373	342	283	244
Receipts less expenses	$	$ 6 580	$ 5 978	$ 5 452	$ 3 079
Total unpaid labor		1 285	1 093	850	770
Net earnings per farm	$	$ 5 295	$ 4 885	$ 4 602	$ 2 309
Net earnings per acre	$	$ 20.40	$ 19.44	$ 18.39	$ 9.04

TABLE 2 (cont'd).--INVESTMENTS AND EARNINGS
Accounting Farms in Farming-Type Area 5, 1940-1943

Item	Your farm	Average of all farms in area			
		1943	1942	1941	1940
Number of farms	--	291	352	362	316
Acres per farm		260	251	250	255
Capital Investments					
Land	$	$18 216	$17 319	$16 944	$17 809
Land improvements		757	670	3 688	3 581
Farm buildings		3 233	3 066		
Horses		260	259	310	374
Productive livestock: Cattle		2 828	2 350	1 911	1 722
Hogs		1 572	1 029	616	612
Sheep		129	139	118	115
Poultry		140	105	85	85
Total productive livestock	( )	(4 669)	(3 623)	(2 730)	(2 534)
Feed, grain, and seeds		3 282	3 062	2 349	2 384
Machinery and equipment		2 272	2 068	1 812	1 831
Automobile (farm share)		317	285	204	168
Total	$	$33 006	$30 352	$28 037	$28 681
Receipts less expenses	$	$ 6 580	$ 5 978	$ 5 452	$ 3 079
Family labor		380	310	248	234
Returns for labor, capital, mgt.	$	$ 6 200	$ 5 668	$ 5 204	$ 2 845
Operator's labor		905	783	602	536
Net earnings per farm	$	$ 5 295	$ 4 885	$ 4 602	$ 2 309
Rate Earned on Investment	%	16.0%	16.1%	16.4%	8.1%
Interest on investment	$	$ 1 650	$ 1 518	$ 1 402	$ 1 434
Labor and Management Earnings		4 550	4 150	3 802	1 411

Net earnings. The net earnings per farm on an inventory basis were slightly higher in 1943 than in 1942; the average was $5,295 in 1943 compared with $4,885 in 1942. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. It is calculated by adding to the cash balance the value of farm products used in the household and the net inventory changes and by subtracting from the resulting total the value of unpaid labor. Therefore this figure indicates the earning power of the business and determines the real value of the farm and its equipment. The net earnings per acre averaged $20.40 in 1943, $19.44 in 1942, $18.39 in 1941, and $9.04 in 1940.

Inventory changes. The year 1943 was the eleventh consecutive year in which inventories were increased. The increases for the past four years ranged from $2,241 in 1941 to $730 in 1943 (Table 2). In 1943 the largest value increases were for feed, grain and seeds even though there was an actual decrease in quantities. The average amounts of grain on hand per accounting farm in Area 5 at the two inventory periods were:

Crop	Beginning of year 1943 (bushels)	End of year 1943 (bushels)	Change (bushels)
Corn	2 478	2 537	+59
Oats	437	396	-41
Wheat	121	63	-58
Soybeans	221	136	-85

TABLE 3.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 5, 1943

Item	Your farm	Standards for your farm	Average of 291 farms
Rate earned on investment	________%	16.0%	16.0%
Number of farms	--	--	291
Acres in farm	________	260	260
Acres in crops	________	163	163
Gross earnings per acre	$________	$________ a/	$ 36.01
Gross expenses per acre			15.61
Investments			
Value of land per acre	$________	$ 70	$ 70
Value of improved land per acre	________	________ a/	79
Value of buildings per acre	________	________ e/	12
Total investment per acre		127	127
Land Use			
Percent of land area tillable	________	________ a/	79.1
Percent of tillable land in:			
Corn	________	________	31.5
Oats	________	________	10.2
Wheat	________	________	6.6
Soybeans	________	________	19.4
Other crops	________	________	3.4
Legume hay and pasture	________	________	15.1
Nonlegume hay and pasture			13.8
Crop Yields			
Corn	________	________ b/	53.0
Oats	________	________	30.3
Wheat	________	15.0	15.0
Soybeans		b/	22.0
Livestock Factors			
Value of feed fed to prod. l.s.	$________	$5 671	$5 671
Feed fed per acre to prod. l.s.	________	________ c/	21.85
Returns per $100 worth of feed fed	________	________	140
Poultry returns per hen	________	4.72	4.72
Number of litters farrowed	________	24	24
Number of pigs weaned per litter	________	6.0	6.0
Returns per litter farrowed	$________	$ 182	$ 182
Average number of cows milked	________	7	7
Dairy returns per cow milked	$	$ c/	$ 152
Labor Factors			
Labor cost per crop acre	$________	$________ d/	$ 11.70
Labor units on crops	________	________ e/	20.6
Labor units on livestock	________	________	19.0
Total labor units	________	________	39.6
Total months of labor	________	________	23.6
Labor units per worker			20.1
Other Expense Factors			
Horse and machinery cost per crop acre	$________	$________ d/	$ 8.34
Land improvements cost per acre	________	.70	.70
Buildings cost per acre	________	________ e/	1.02
Land tax per acre		a/	1.09

a/ Table 4, value of improved land.
b/ Fig. 1, value of improved land.
c/ Table 5, source of income.
d/ Table 8, size of farm and value of feed fed per acre.
e/ Table 7, size of farm.

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS

Accounting Farms in Farming-Type Area 5, 1943

The numbers above the double line are the averages for the farms similar in organization to your farm. By drawing a line across each column at the place which measures the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

			Factors that affect the gross earnings										Factors that affect expenses		
				Crop yields											
Rate earned on investment, percent	Acres in farm	Gross earnings per acre	Percent of tillable land in legume hay and pasture	Corn, bu.	Oats, bu.	Soybeans, bu.	Feed fed per acre to prod. l.s.	Returns per $100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked	Total expense per acre	Horse and machinery cost per crop acre	Labor cost per crop acre	Buildings cost per acre
36.0	510								7.22	257					
32.0	460								6.72	242					
28.0	410								6.22	227					
24.0	360								5.72	212					
20.0	310								5.22	197					
16.0	260								4.72	182					
12.0	210								4.22	167					
8.0	160								3.72	152					
4.0	110								3.22	137					
--	60								2.72	122					
---	--								2.22	107					
* 4%	50	$3	3%	4 bu.	4 bu.	2 bu.	$2	$20	$.50	$15	$10	$2	$1	$1	$.20

*Each space between lines represents the value indicated at bottom of each column.

TABLE 4.--USE OF TILLABLE LAND AND OTHER FACTORS RELATED TO THE VALUE OF IMPROVED LAND

Accounting Farms in Farming-Type Area 5, 1943

Item	Value of improved land					
	Less than $43	$43 to $62	$63 to $82	$83 to $102	$103 to $122	More than $122
Average value of improved land- -	$35	$54	$74	$96	$110	$133
Number of farms - - - - - - - - - -	29	76	83	63	15	25
Acres per farm- - - - - - - - - - -	260	263	251	275	223	260
Percent of land area tillable - -	63.5	74.3	79.0	85.2	86.7	91.8
Percent of tillable land in:						
Corn- - - - - - - - - - - - - - -	26.7	31.4	30.7	31.7	38.5	34.2
Oats- - - - - - - - - - - - - - -	9.8	12.4	9.5	10.5	8.8	6.8
Wheat - - - - - - - - - - - - - -	7.1	6.9	7.2	6.6	4.8	5.2
Soybeans- - - - - - - - - - - - -	11.4	11.8	17.7	25.8	19.6	33.9
Other crops - - - - - - - - - - -	5.4	4.2	4.1	1.7	3.4	2.3
Legume hay and pasture- - - - -	19.6	18.9	17.5	10.3	12.9	8.8
Nonlegume hay and pasture - - -	20.0	14.4	13.3	13.4	12.0	8.8
Gross earnings per acre - - - - -	$26.38	$29.06	$36.73	$42.25	$43.37	$49.34
Gross expenses per acre - - - - -	15.59	14.63	$15.54	17.02	18.82	17.04
Net earnings per acre- - - - - -	$10.79	$14.43	$21.19	$25.23	$24.55	$32.30
Land tax per acre - - - - - - - -	$ .71	$ .88	$ 1.08	$ 1.31	$ 1.43	$ 1.40

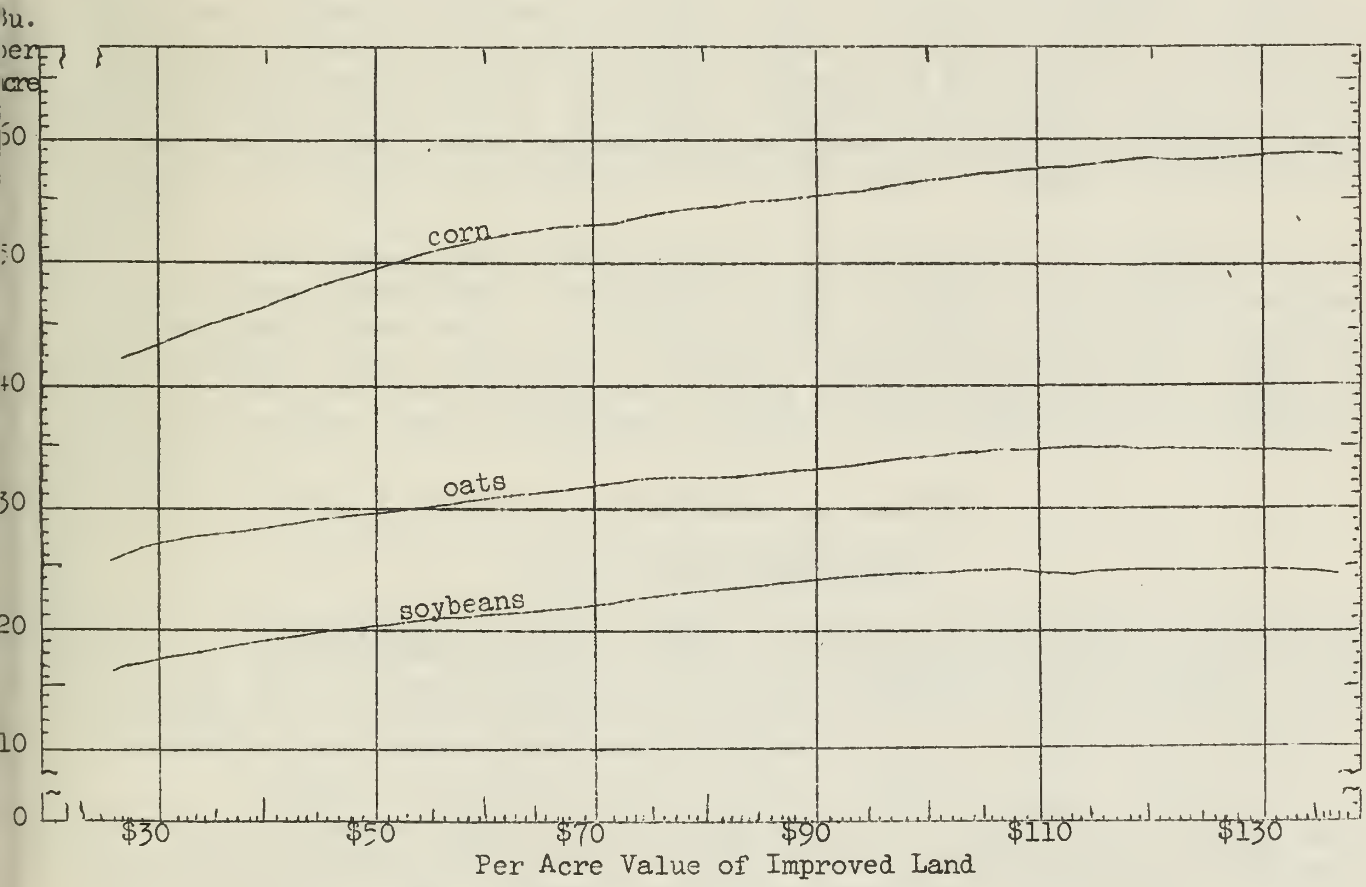

Fig. 1.--Average yields of corn, oats, and soybeans with varying values of improved land.

Unpaid family labor. The total valuation of unpaid labor was higher for 1943 than for any other year in the past four. This increase resulted principally from the fact that the physical labor of the operator and other members of the family was valued at prevailing farm wages in Area 5, which were approximately $80 per month in 1943, $70 per month in 1942, $55 per month in 1941, and $50 per month in 1940.

Variation in farm earnings. A wide variation was found in earnings on the farms in Area 5. For example, 43 farms earned less than nine percent on their investment; but 32 farms earned 24 percent or more (Table 5). After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had $1,029 for their labor and management earnings contrasted with $7,915 for the latter group.

Table 5.--Variation in 1943 Earnings, 291 Accounting Farms in Area 5

Rate earned on investment	Number of farms	Average rate earned	Acres per farm	Capital invested per farm	Gross earnings per farm	Net earnings per farm	Labor and management earnings
(percent)		(percent)					
Less than 9.00	43	5.7	232	$25 983	$ 6 755	$ 1 481	$1 029
9.00 to 13.99	83	11.7	266	34 260	9 109	4 008	3 209
14.00 to 18.99	74	16.6	257	35 647	11 286	5 910	5 058
19.00 to 23.99	59	21.3	282	34 580	12 195	7 366	6 538
24.00 or more	32	28.2	256	30 176	13 481	8 511	7 915

Explanation of Tables

Variable standards are used in analyzing the farm business (Table 3). They make allowances for the following facts: (1) that the quality of land affects the cropping system and the crop yields; (2) that the kind of livestock influences the amount of feed fed and the returns per $100 worth of feed fed; (3) that the size and intensity of the farm business affects practically all the cost items; and (4) that price relationships and quantities of the products produced affect the relative profitableness of various types of farming for any particular year.

The terms used in the tables are in the same as the terms used in the Illinois farm account book. For example, "improved land" is classified on Page 1 of the farm account book. It means crop land, tillable pasture, and land occupied by farmstead, roads, and lanes. Likewise, "crop acres" are listed on page 20 of the farm account book. They include all the tillable land on which a large amount of work has been done in preparing a seedbed or in cultivating or harvesting a crop.

(Note: A labor unit is explained on page 12.)

Land Use and Crop Yields

The percent of tillable land in grain crops increased as the value per acre for improved land increased (Table 4). Likewise, the earnings per acre and the land tax per acre increased as the value of improved land increased. On the other hand, the percent of tillable land in legume and nonlegume hay and pasture decreased as the value of the land increased.

Yields per acre for corn, oats, and soybeans tended to increase as the land value increased (Fig. 1). By using Table 4 and Figure 1, the account keeper may find out whether his acreage in various crops, crop yields, and earnings per acre were high or low in comparison with the average of other farms in his area having about the same value of improved land.

[illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible]

[illegible]

TABLE 6.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 5, 1943

Item	Your farm	Source of Income				
		Crops 40%+	Dairy sales 40%+	Hogs 40%+	Beef cattle 40%+	General farms
Number of farms - - - - - - - - - -		46	20	142	9	74
Percent of income from prod. l.s.		35.7	91.6	92.1	92.6	75.8
Percent of income from crops- - -		54.8	--	--	--	13.0
Investments						
Total per farm- - - - - - - - - -		$41 280	$25 995	$30 776	$66 400	$29 975
Total per acre- - - - - - - - - -		138	110	125	149	123
Land per acre - - - - - - - - - -		90	57	65	72	68
Land improvements per acre- - -		2.43	2.13	3.02	3.73	3.11
Buildings per acre- - - - - - -		10.21	14.39	12.93	16.04	11.93
Machinery per acre- - - - - - -		10.98	10.73	9.64	8.21	10.05
Earnings						
Per farm						
Gross earnings- - - - - - - -		$11 478	$ 9 252	$ 9 474	$18 140	$ 8 517
Gross expenses- - - - - - - -		4 433	5 858	4 408	9 153	3 810
Net earnings- - - - - - - - -		$ 7 045	$ 3 394	$ 5 066	$ 8 987	$ 4 707
Net earnings per acre - - - - -		23.62	14.43	20.51	20.15	19.33
Rate earned on investment - - -		17.1%	13.1%	16.5%	13.5%	15.7%
Labor and management earnings -		$ 5 901	$ 3 039	$ 4 427	$ 6 487	$ 4 117
Size and Intensity						
Acres per farm- - - - - - - - -		298	235	247	446	243
Percent of land area tillable -		87.7	78.3	75.1	86.3	78.9
Percent tillable land in grain-		78.3	53.1	66.8	60.1	68.7
Percent in hay and pasture- - -		19.4	42.2	31.1	34.9	27.9
Feed fed per acre to prod. l.s[1]		$ 10.28	$ 23.60	$ 26.12	$ 32.61	$ 19.48
Months of labor per 100 crop A.		10.6	22.8	15.6	12.0	14.8
Total months of labor - - - - -		23.7	28.4	22.6	32.4	23.3
Crop Yields Per Acre						
Corn, bu. - - - - - - - - - - - -		50.6	48.3	55.3	58.5	50.0
Wheat, bu.- - - - - - - - - - - -		17.5	11.3	15.3	10.2	14.8
Livestock Returns						
Per $100 feed fed[1] - - - - - -		$ 143	$ 157	$ 140	$ 117	$ 143
Hog returns per litter[1] - - - -		165	175	191	165	163
Dairy returns per cow[1] - - - -		122	231	120	72	147
Labor Factors						
Labor cost per crop acre- - - -		$ 8.46	$ 17.83	$ 12.59	$ 10.11	$ 11.80
Labor units on crops- - - - - -		29.5	14.9	18.3	34.4	19.5
Labor units on livestock- - - -		12.9	29.8	19.7	22.0	18.1
Total labor units - - - - - -		42.4	44.7	38.0	56.4	37.6
Labor units per worker- - - - -		21.4	18.8	20.2	20.9	19.4
Other Expense Factors						
Horse and machinery cost per crop acre - - - - - - - - - - -		$ 7.13	$ 11.14	$ 8.71	$ 8.37	$ 8.17
Land improvements cost per acre		.62	.90	.73	.86	.64
Buildings cost per acre - - - -		.80	1.42	1.06	1.39	.91
Land tax per acre - - - - - - -		1.26	.97	1.06	.87	1.11

[1] Used in Table 3.

Source of Income

The grouping of accounting farms according to source of income gives each farmer an opportunity to compare his farm with the average of other farms having similar sources of income. It also gives him an opportunity to study investments, land use, crop yields, labor requirements, horse and machinery requirements, and other factors that are associated with various types of farming.

Interpretation of table. Each farmer should, however, use caution in interpreting the data in Table 6. For example, the fact that grain farms earned 17.1 percent on the investment for 1943 and dairy farms earned 13.1 percent does not mean that such a relationship will prevail over a long period of years. The relative profitableness of enterprises is due largely to conditions affecting price and production.

In comparing the returns on the various groups of farms per $100 worth of feed fed, one should consider the fact that there is a wide variation in the needed returns per $100 worth of feed fed to pay for feed (including pasture), labor, equipment, buildings, and other costs. According to 5-year averages of complete cost studies (1933-1937), the necessary returns were: poultry, $195; dairy cattle, $157; hogs, $127 and feeder cattle, $117.

Labor. Labor cost per crop acre varied from $8.46 on the grain farms to $17.83 on the dairy farms; whereas, labor units per worker varied from 21.4 units on the grain farms to 18.8 on the dairy farms. Variation between groups was greater in labor units on crops than in labor units on livestock.

Labor input per 100 crop acres was lowest on the grain farms, where 10.6 months of labor per 100 acres were used, and highest on the dairy farms where 22.8 months of labor were used. Except for the dairy and beef cattle farms, there was little difference among the five groups in the total months of labor.

Other expense factors. Horse and machinery cost per crop acre averaged $7.13 on the grain farms and $11.14 on the dairy farms; land improvements cost per acre and buildings cost per acre were lowest on the grain farms where they averaged $.62 and $.80 respectively, and highest on the dairy farms, where they averaged $.90 and $1.42 respectively.

Size of Farm

When average farm earnings are above the capitalization rate (5 percent is the usual rate used), large farms usually show higher labor and management earnings than small farms. Conversely, when average farm earnings are below the capitalization rate, large farms show a greater loss. In 1943, with farm earnings averaging 16.0 percent in Area 5, the labor and management earnings on the 26 largest farms averaged $8,822 contrasted with $2,345 on the 22 smallest farms.

The rate earned on investment did not show any consistent variation due to size of the farm.

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[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

TABLE 7.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 5, 1943

Item	Total acres in farm					
	Less than 121	121 to 200	201 to 280	281 to 360	361 to 440	441 or more
Number of farms	22	101	77	41	24	26
Acres per farm	103	168	240	320	403	579
Investments						
Total per farm	$15 282	$22 203	$31 202	$41 783	$44 081	$71 244
Total per acre	148	132	130	131	109	123
Land improvements per acre	3.91	3.14	3.10	2.20	2.45	3.22
Buildings per acre1/	15.34	13.31	13.19	11.65	12.07	11.10
Machinery per acre	13.82	11.46	10.99	10.20	7.80	7.67
Earnings						
Per farm						
Gross earnings	$ 4 632	$ 6 655	$ 8 800	$11 602	$12 960	$18 531
Gross expenses	2 375	3 118	4 021	4 825	5 161	6 963
Net earnings	$ 2 257	$ 3 537	$ 4 779	$ 6 777	$ 7 799	$11 568
Net earnings per acre	21.91	21.01	19.95	21.20	19.33	20.00
Rate earned on investment	14.8%	15.9%	15.3%	16.2%	17.7%	16.2%
Labor and management earnings	$ 2 345	$ 3 337	$ 4 156	$ 5 616	$ 6 484	$ 8 822
Size and Intensity						
Percent of land area tillable	84.9	84.4	81.1	80.9	66.7	76.2
Percent tillable land in grain	72.6	67.3	68.8	72.8	65.8	65.9
Percent in hay and pasture	25.4	29.6	29.6	25.0	29.7	30.8
Feed fed per acre to prod. l.s.	$ 23.06	$ 23.77	$ 21.78	$ 21.01	$ 20.50	$ 21.15
Percent of income from prod. l.s.	75.8	84.2	81.8	77.8	91.3	77.6
Percent of income from crops	14.4	5.6	8.9	13.2	--	13.4
Months of labor per 100 crop A.	20.8	17.2	15.2	12.5	14.4	10.9
Total months of labor1/	15.3	19.3	23.6	26.4	30.3	37.1
Crop Yields per Acre						
Corn, bu.	53.4	52.0	51.9	52.1	55.7	54.8
Wheat, bu.	14.4	13.9	15.2	15.9	16.7	13.7
Livestock Returns						
Per $100 feed fed	$ 157	$ 147	$ 144	$ 139	$ 148	$ 120
Hog returns per litter	157	183	189	169	209	168
Dairy returns per cow	127	155	157	161	137	140
Labor Factors						
Labor cost per crop acre	$ 16.62	$ 13.86	$ 12.19	$ 10.00	$ 11.19	$ 9.02
Labor units on crops1/	9.8	14.1	19.5	26.9	25.5	44.1
Labor units on livestock1/	11.8	16.5	18.2	21.9	24.1	28.1
Total labor units1/	21.6	30.6	37.7	48.8	49.6	72.2
Labor units per worker1/	16.9	19.0	19.1	22.2	19.7	23.4
Other Expense Factors						
Horse and machinery cost per crop acre	$ 10.07	$ 9.19	$ 8.86	$ 7.77	$ 8.26	$ 6.86
Land improvements cost per acre	.84	.76	.73	.60	.59	.77
Buildings cost per acre1/	1.58	1.12	1.06	1.03	.97	.78
Land tax per acre	1.19	1.18	1.15	1.13	.89	.98

1/ Used in Table 3.

Intensity. The smaller farms were operated more intensively than were the larger ones. This variation was indicated by the higher proportion of land area tillable, larger amount of feed fed per acre to productive livestock, and by more months of labor per 100 crop acres.

Labor. As the size of the farms increased from less than 121 acres to 441 acres or more, the labor cost per crop acre decreased from $16.62 to $9.02. On the other hand, labor units on crops increased from 9.8 to 44.1; labor units on livestock increased from 11.8 to 28.1; total labor units increased from 21.6 to 72.2; and labor units per worker increased from 16.9 to 23.4.

Other expense items. Expense per crop acre from the smallest to the largest size group decreased for horses and machinery from $10.07 to $6.86; for buildings from $1.58 to $.78 and for land taxes from $1.19 to $.98.

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Labor and Horse and Machinery Expenses

Labor and horse and machinery expenses per crop acre increase as the amount of livestock per acre increases, but decrease as the size of farm increases. Therefore the efficiency of a farm in using labor and machinery should be determined by comparing the expenses on the individual farm with those of other farms of the same size having similar amounts of livestock per acre. The average labor cost per crop acre and the average horse and machinery cost per crop acre are shown for farms grouped according to acres per farm and value of feed fed per acre to productive livestock (Table 8).

TABLE 8.--LABOR COST PER CROP ACRE AND HORSE AND MACHINERY COST PER CROP ACRE FOR VARIATIONS IN SIZE OF FARM AND AMOUNT OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK
Accounting Farms in Farming-Type Area 5, 1943

Acres per farm	Feed fed per acre				Feed fed per acre			
	Less than $12.00	$12.00 to $21.99	$22.00 to $31.99	$32.00 or more	Less than $12.00	$12.00 to $21.99	$22.00 to $31.99	$32.00 or more
	(labor cost per crop acre)				(horse and machinery cost per crop acre)			
Less than 121	$15.55	$16.26	$16.48	$17.72	$ 8.72	$ 8.94	$ 9.62	$11.62
121 to 200	12.15	13.02	14.41	16.25	8.00	8.60	9.31	10.70
201 to 280	9.42	12.16	12.91	15.58	7.50	8.50	9.06	10.26
281 to 360	8.60	10.59	11.30	12.00	6.43	7.48	8.50	8.80
361 to 440	8.73	11.00	11.23	11.52	6.91	7.89	8.12	9.10
441 or more	7.82	9.03	10.31	10.87	5.78	6.25	7.09	8.16

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Supplementary Labor Analysis

Labor units are used in this report to supplement the foregoing measures of labor efficiency.

A labor unit is essentially the same as a war unit. It is the approximate amount of time under average conditions that is required to take care of a dairy cow for one year or to do an equivalent amount of work with other livestock or crops. For example, the labor unit assumes that one dairy cow requires about as much work as 5.5 acres of corn, 8.3 acres of soybeans for grain, 14.3 acres of small grain or hay, 10 beef cows, 20 feeder cattle, 3 litters of pigs, 33 sheep, 160 feeder lambs, or 77 hens.

Obviously, no other computation of work units for the individual farmer will agree with those written in this report unless the acres and classification of crops as well as the numbers and kinds of livestock are the same as those recorded in the farm account book.

Labor Saving References

Labor simplification is suggested by the picture on the front cover of this report. For additional suggestions, ideas, and plans see your farm adviser or write directly to the University of Illinois, for the following publications:

Department of Agricultural Economics

"Making Your Labor Go Further," mimeograph AE-2182
"Feeding Cattle With Less Labor," AE-2169
"Making the Most of Available Labor," AE-2001

Emergency Farm Labor Office

"Making Food With Less Labor," printed leaflet

Department of Agricultural Engineering

"Hog Equipment," Circular 554
In addition, the Department of Agricultural Engineering supplies lists from which plans for labor saving devices, equipment, and structures may be selected.

Producing for War Needs

The account keeper should use the standards in this report to compare his own production with that of other account keepers. He should then adopt on his farm the kind of farm plan and the management practices that will make the best possible use of land, buildings, livestock, labor, machinery, and other resources for the duration of the war. Thus he will have more products to put on the nation's markets and so will be making the greatest possible contribution to the war effort.

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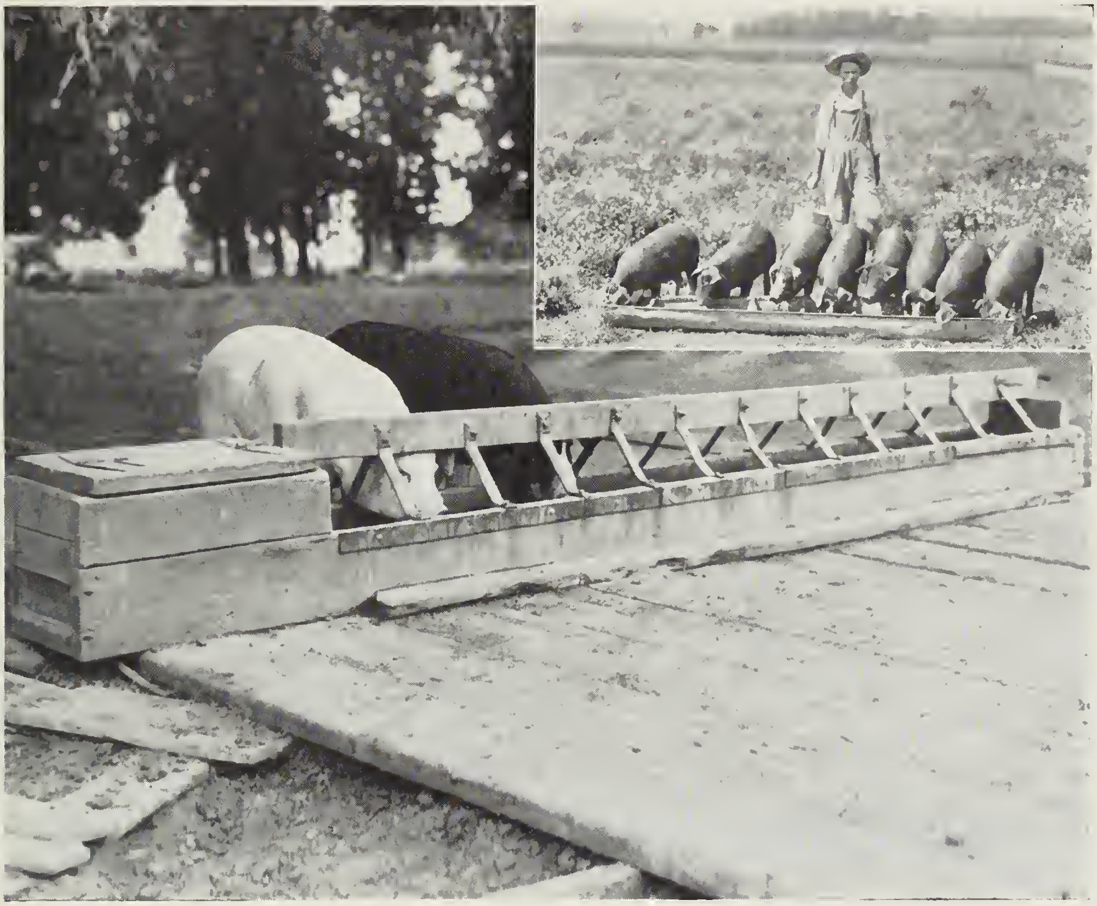
FARM BUSINESS REPORT . . . 1943



Labor-saving methods and devices lead to increased wartime production. This homemade waterer, which may be attached to a pressure system or to a tank wagon, is float controlled, requires little attention and provides fresh water at all times. Moreover, it is mudhole proof. Upper right — the hard way.

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FARMING-TYPE AREA SIX
St. Louis Dairy and Wheat Area

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
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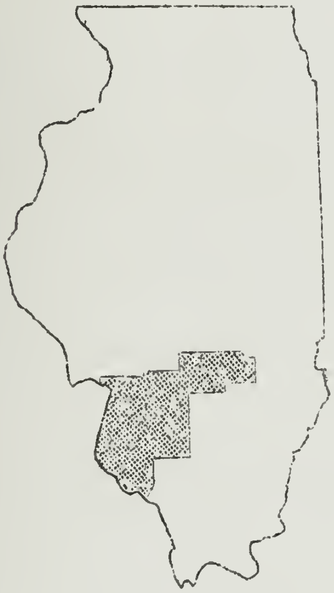
Annual Farm Business Report

ON TWO HUNDRED NINETY-SEVEN FARMS IN FARMING-TYPE AREA 6, 1943

By J. B. Cunningham, E. L. Sauer, and J. A. Snyder[1]

Production. Accounting farmers in Farming-Type Area 6 attempted to step-up production in 1943 over that of 1942 by increasing grain acreage, numbers of pigs, and hens.

Item	1942	1943	Change
Acres per farm	216	217	1 acre increase
Acres of grain crops	94	98	4 acres increase
Number of dairy cows	10	10	None
Number of pigs weaned	63	67	4 pigs increase
Number of hens	179	187	8 hens increase
Total months of labor	23	23	None
Value of machinery (beginning of year)	$1 893	$2 018	$125 increase
Tons of grain produced	61	60	1 ton decrease
Measure of volume of production for dairy products, hogs, and poultry and eggs[2]	$3 525	$3 579	$54 increase



▩ Farming-Type Area 6
Wheat, Dairy, and
Poultry

The farms used the same amount of labor in 1943 as in 1942 and, as usual, about 80 percent of the labor was operator's and family labor, including women, children and older men.

Increased machinery investments reflect 1942 purchases of movable hog houses, brooder houses, and other livestock equipment rather than large purchases of tillage tools.

Total grain produced per farm decreased from 61 tons in 1942 to 60 tons in 1943 because spring floods and unfavorable weather decreased corn yield per acre from 42.9 bushels to 35.6 bushels and oat yield from 30.2 bushels to 23.6 bushels. On the other hand, production of dairy products, hogs, and poultry and eggs, as measured by adjusted receipts and net increases, showed a small increase.

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[1] The project was conducted in cooperation with the county farm bureaus and was supervised by the following farm advisers: T. W. May, Madison; E. C. Secor, Randolph; W. H. Tammeus, Bond; B. W. Tillman, St. Clair; C. S. Cutright, Effingham; A. B. Rowand, Washington; C. E. Twigg, Clinton; E. S. Amrine, Monroe; and J. B. Turner, Fayette.

[2] Receipts and net increases in 1943 were adjusted to the 1942 price level by dividing the 1943 receipts and net increases by the ratio of 1943 to 1942 Illinois farm price for hogs and poultry and eggs and St. Louis milk prices for dairy products.

TABLE 1.--INVENTORY CHANGES, CASH INCOME, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 6, 1940-1943

Item	Your farm	Average of all farms in area			
		1943	1942	1941	1940
Inventory Changes					
Land improvements	$	$ 30	$ 40	$) 66	$ 65
Farm buildings		15	-14	)	
Horses		-22	-20	-53	-39
Productive livestock		59	349	386	143
Feed, grain, and seeds		282	150	275	217
Machinery and equipment		-60	150	179	119
Automobile (farm share)		-33	-26	26	9
Total	$	$ 271	$ 629	$ 879	$ 514
Cash Receipts					
Land improvements	$	$ 4	$ 3	$) 5	$ 5
Farm buildings		3	11	)	
Horses		50	46	48	39
Productive livestock: Cattle		938	964	773	603
Dairy sales		1832	1480	1233	915
Hogs		1645	1369	886	531
Sheep		79	80	68	49
Poultry		204	143	112	102
Egg sales		609	471	317	236
Total productive livestock	( )	(5307)	(4507)	(3389)	(2436)
Feed, grain, and seeds		1421	1166	987	853
Machinery and equipment		167	188	203	208
Automobile (farm share)		11	17	37	28
AAA receipts		423	235	131	314
Labor off farm		31	23	32	38
Miscellaneous		3	8	15	26
Total	$	$ 7420	$ 6204	$ 4847	$ 3947
Cash Expenses					
Land improvements	$	$ 189	$ 170	$) 273	$ 251
Farm buildings		204	195	)	
Horses		39	29	23	24
Productive livestock: Cattle		324	376	308	261
Hogs		117	96	67	40
Sheep		17	15	7	7
Poultry		63	46	32	27
Total productive livestock	( )	(521)	(533)	(414)	(335)
Feed and grain purchases		1435	962	616	399
Crop and sealing expense		199	152	118	85
Machinery and equipment		887	1020	886	715
Automobile (farm share)		107	109	160	116
Livestock expense		73	64	45	39
Hired labor		404	348	275	236
Taxes		193	186	181	167
Miscellaneous		35	31	26	23
Total	$	$ 4286	$ 3799	$ 3017	$ 2390
Summary					
Total inventory change	$	$ 271	$ 629	$ 879	$ 514
Cash balance		3134	2405	1830	1557
Farm products used in household		394	349	282	250
Receipts less expenses	$	$ 3799	$ 3383	$ 2991	$ 2321
Total unpaid labor		1449	1174	804	689
Net earnings per farm	$	$ 2350	$ 2209	$ 2187	$ 1632
Net earnings per acre	$	$10.82	$10.21	$10.27	$ 8.15

TABLE 2.--INVESTMENTS AND EARNINGS
Accounting Farms in Farming-Type Area 6, 1940-1943

Item	Your farm	Average of all farms in area			
		1943	1942	1941	1940
Number of farms	--	297	320	307	255
Acres per farm	--	217	216	213	200
Capital Investments					
Land	$	$ 9 987	$ 9 899	$ 9 811	$ 9 614
Land improvements		463	472	2 830	2 725
Farm buildings		2 412	2 539		
Horses		282	308	362	423
Productive livestock: Cattle		1 550	1 447	1 325	1 148
Hogs		560	392	244	270
Sheep		61	60	55	45
Poultry		194	167	133	133
Total productive livestock	( )	(2 365)	(2 066)	(1 757)	(1 596)
Feed, grain, and seeds		2 001	1 915	1 742	1 594
Machinery and equipment		2 018	1 893	1 686	1 588
Automobile (farm share)		251	242	175	144
Total	$	$19 779	$19 334	$18 363	$17 684
Receipts less expenses	$	$ 3 799	$ 3 383	$ 2 991	$ 2 321
Family labor		540	459	316	255
Returns for labor, capital, mgt.	$	$ 3 259	$ 2 924	$ 2 675	$ 2 066
Operator's labor		909	715	488	434
Net earnings per farm	$	$ 2 350	$ 2 209	$ 2 187	$ 1 632
Rate Earned on Investment	%	11.9%	11.4%	11.9%	9.2%
Interest on investment	$	$ 989	$ 967	$ 918	$ 884
Labor and Management Earnings		2 270	1 957	1 757	1 182

Net earnings. The net earnings per farm on an inventory basis were about the same in 1943 as in 1942; the average was $2,350 in 1943 compared with $2,209 in 1942. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. The average net earnings per acre were $10.82 in 1943, $10.21 in 1942, $10.27 in 1941, and $8.15 in 1940.

Inventory changes. The year 1943 was the eighth consecutive year in which inventories were increased. The largest increase for the past four years was $879 in 1941 and the smallest, $271 in 1943 (Table 1). In 1943 the largest value increase was for feed and grain, even though quantities decreased. The average amounts of grain on hand in Area 6 at the two inventory periods were:

Crop	Beginning of year (bushels)	End of year (bushels)
Corn	947	829
Oats	383	278
Wheat	179	167
Soybeans	77	66

Cash receipts and cash expenses. In 1943 cash receipts exceeded cash expenses by $3,134, the largest margin for any year in the past four. The cash balance--the difference between cash receipts and expenses--is the amount of money which was available for family living expenses, interest, debt payments, and savings.

TABLE 3.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 6, 1943

Item	Your farm	Standards for your farm	Average of 297 farms
Rate earned on investment	______%	11.9%	11.9%
Acres in farm	______	217	217
Acres in crops	______	133	133
Gross earnings per acre	$______	$______a/	$ 26.54
Gross expenses per acre			15.72
Investments			
Value of land per acre	$______	$ 46	$ 46
Value of improved land per acre	______	______a/	50
Value of buildings per acre	______	______e/	11.10
Total investment per acre		91	91
Land Use			
Percent of land area tillable	______	______a/	80.3
Percent of tillable land in:			
Corn	______	______	19.4
Oats	______	______	11.2
Wheat	______	______	17.3
Soybeans	______	______	9.0
Other crops	______	______	9.3
Legume hay and pasture	______	______	21.9
Nonlegume hay and pasture			11.9
Crop Yields			
Corn, bu.	______	______b/	35.6
Oats, bu.	______	______	23.6
Wheat, bu.	______	17.6	17.6
Soybeans, bu.		b/	13.2
Livestock Factors			
Value of feed fed to prod. l.s.	$______	$ 3 321	$3 321
Feed fed per acre to prod. l.s.	______	______c/	15.29
Returns per $100 worth of feed fed	______	______	155
Poultry returns per hen	______	4.67	4.67
Number of litters farrowed	______	10.7	10.7
Number of pigs weaned per litter	______	6.3	6.3
Returns per litter farrowed	$______	$ 181	$ 181
Average number of cows milked	______	10.3	10.3
Dairy returns per cow milked	$	$ c/	$ 186
Labor Factors			
Labor cost per crop acre	$______	$______d/	$ 13.70
Labor units on crops	______	______e/	14.2
Labor units on livestock	______	______	16.9
Total labor units	______	______	31.1
Total months of labor	______	______	23.5
Labor units per worker			15.9
Other Expense Factors			
Horse and machinery cost per crop acre	$______	$______d/	$ 8.39
Land improvements cost per acre	______	.71	.71
Buildings cost per acre	______	______e/	.86
Land tax per acre		______a/	.73

a/ Table 4, value of improved land.
b/ Fig. 1, value of improved land.
c/ Table 5, source of income.
d/ Table 7, size of farm and value of feed fed per acre.
e/ Table 6, size of farm.

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS

Accounting Farms in Farming-Type Area 6, 1943

The numbers above the double line are the averages for the farms similar in organization to your farm. By drawing a line across each column at the place which measures the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

			Factors that affect the gross earnings										Factors that affect expenses		
				Crop yields											
Rate earned on investment, percent	Acres in farm	Gross earnings per acre	Percent of tillable land in legume hay and pasture	Corn, bu.	Oats, bu.	Soybeans, bu.	Feed fed per acre to prod. l.s.	Returns per $100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked	Total expense per acre	Horse and machinery cost per crop acre	Labor cost per crop acre	Buildings cost per acre
26.9	367								6.17	256					
23.9	337								5.87	241					
20.9	307								5.57	226					
17.9	277								5.27	211					
14.9	247								4.97	196					
11.9	217								4.67	181					
8.9	187								4.37	166					
5.9	157								4.07	151					
2.9	127								3.77	136					
--	97								3.47	121					
--	67								3.17	106					
* 3%	30	$3	3%	4bu.	4bu.	2bu.	$2	$20	$.30	$15	$10	$1	$1	$1	$.20

* Each space between lines represents the value indicated at bottom of each column.

TABLE 4.--USE OF TILLABLE LAND AND OTHER FACTORS RELATED TO THE VALUE OF IMPROVED LAND
Accounting Farms in Farming-Type Area 6, 1943

Item	Value of Improved Land				
	Less than $35	$35 to $49	$50 to $64	$65 to $79	$80 or more
Average value of improved land- - -	$29	$41	$55	$71	$87
Number of farms - - - - - - - - - - -	51	90	90	37	29
Acres per farm- - - - - - - - - - - -	256	213	217	203	182
Percent of land area tillable - - -	75.9	81.9	80.5	79.6	86.5
Percent of tillable land in:					
Corn- - - - - - - - - - - - - - - -	17.1	18.7	19.6	21.0	24.2
Oats- - - - - - - - - - - - - - - -	11.6	12.1	10.5	11.2	9.3
Wheat - - - - - - - - - - - - - - -	13.3	16.4	18.1	20.9	21.4
Soybeans- - - - - - - - - - - - - -	10.9	9.5	8.6	8.3	5.2
Other crops - - - - - - - - - - - -	9.8	8.2	9.3	8.5	14.0
Legume hay and pasture- - - - - -	23.5	21.8	22.8	20.6	17.6
Nonlegume hay and pasture - - - -	13.8	13.3	11.1	9.5	8.3
Gross earnings per acre[1] - - - - -	$19.16	$26.66	$28.62	$29.25	$36.33
Gross expenses per acre[1] - - - - -	12.73	15.23	16.65	17.66	22.23
Net earnings per acre - - - - - - -	$ 6.43	$11.43	$11.97	$11.59	$14.10
Land tax per acre - - - - - - - - - -	$ .57	$ .65	$ .77	$ .94	$ 1.01

1/ Used in Table 3.

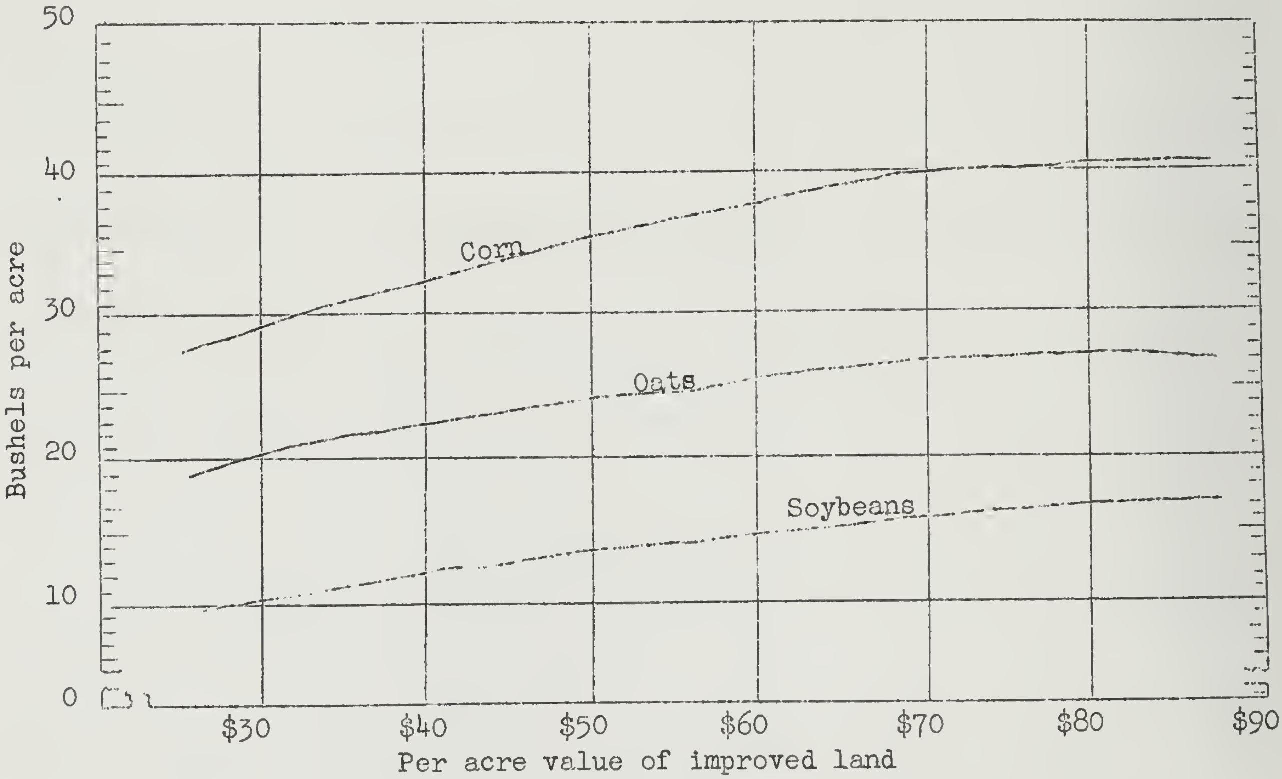

Fig. 1.--Average yields of corn, oats, and soybeans with varying values of improved land.

Unpaid family labor. Although there was no appreciable change in the amount of family labor available, the total valuation of unpaid labor was higher for 1943 than for any other year in the past four. This increase resulted from the fact that the physical labor of the operator and other members of the family was valued at prevailing farm wages which were approximately $80 per month in 1943, $65 per month in 1942, $45 per month in 1941, and $40 per month in 1940.

Variation in farm earnings. A wide variation was found in earnings on the farms in Area 6. For example, 39 farms earned less than 5 percent on their investment, with an average of 1.4 percent; but 41 farms earned 20 percent or more, with an average of 24.0 percent. After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had $187 for labor and management earnings contrasted with $4,249 for the latter group.

Rate earned on investment (percent)	Number of farms	Average rate earned (percent)	Acres per farm	Capital invested per farm	Gross earnings per farm	Net earnings per farm	Labor and management earnings
Less than 5.00	39	1.4	237	$19 871	$5 036	$ 283	$ 187
5.00 to 9.99	86	7.5	208	20 105	5 552	1 513	1 400
10.00 to 14.99	79	12.6	212	20 193	6 511	2 552	2 466
15.00 to 19.99	52	17.2	239	20 260	7 345	3 492	3 411
20.00 or more	41	24.0	200	17 602	7 920	4 232	4 249

Explanation of Tables

Variable standards are used in analyzing the farm business (Table 3). They make allowances for the following facts: (1) that the quality of land affects the cropping system and the crop yields; (2) that the kind of livestock influences the amount of feed fed and the returns per $100 worth of feed fed; (3) that the size and intensity of the farm business affects practically all the cost items; and (4) that price relationships and quantities of the products produced affect the relative profitableness of various types of farming for any particular year.

(Note--Labor Units are explained on page 11).

Land Use and Crop Yields

The percent of tillable land in grain crops and "other crops" increased as the value per acre for improved land increased (Table 4). Likewise the percent of land area tillable, the earnings per acre, and the land tax per acre increased as the value of improved land increased. On the other hand, the percent of tillable land in legume and nonlegume hay and pasture decreased as the value of the land increased.

Yields per acre for corn, oats, and soybeans increased as the value of improved land increased (Fig. 1). By using Table 4 and Figure 1, the account keeper may find out whether his acreage in various crops, his crop yields, and his net earnings per acre were high or low for 1943 in comparison with the average of other farms in his area having about the same value for improved land.

TABLE 5.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 6, 1943

Item	Source of Income				
				General Farms	
	Grain 40% +	Dairy sales 40% +	Hogs 40% +	L.S. 60%-	L.S. 60% +
Number of farms - - - - - - - - - -	17	92	42	33	113
Percent of income from prod. l.s.	35.4	87.4	89.1	53.3	82.2
Percent of income from crops- - -	49.3	--	--	30.2	1.7
Investments					
Total per farm- - - - - - - - - -	$17 946	$19 685	$23 564	$20 220	$18 596
Total per acre- - - - - - - - - -	77	98	96	83	88
Land per acre - - - - - - - - - -	48	47	48	45	44
Land improvements per acre- - -	1.13	2.16	2.44	1.66	2.30
Buildings per acre- - - - - - -	7.82	13.76	10.31	8.65	10.79
Machinery per acre- - - - - - -	7.79	12.27	9.54	9.57	10.17
Earnings					
Per farm					
Gross earnings- - - - - - - -	$ 5 965	$ 6 571	$ 7 859	$ 5 772	$ 5 158
Gross expenses- - - - - - - -	2 980	3 996	5 382	3 145	3 215
Net earnings- - - - - - - - -	$ 2 985	$ 2 575	$ 2 477	$ 2 627	$ 1 943
Net earnings per acre - - - - -	12.84	12.88	10.13	10.74	9.22
Rate earned on investment - - -	16.6%	13.1%	10.5%	13.0%	10.4%
Labor and management earnings -	$ 2 953	$ 2 520	$ 2 205	$ 2 552	$ 1 905
Size and Intensity					
Acres per farm- - - - - - - - -	232	200	244	245	211
Percent of land area tillable -	80.5	82.3	75.6	83.8	79.7
Percent tillable land in grain-	66.3	56.6	61.8	62.2	58.1
Percent in hay and pasture- - -	24.6	38.4	30.3	30.9	34.2
Feed fed per acre to prod.l.s.1/	$ 6.15	$ 17.23	$ 22.58	$ 9.09	$ 14.27
Months of labor per 100 crop A.	14.3	19.6	17.5	13.8	18.1
Total months of labor - - - - -	20.9	24.5	24.8	22.2	22.9
Crop Yields per Acre					
Corn, bu. - - - - - - - - - - - -	39.8	33.3	38.6	36.1	34.6
Wheat, bu.- - - - - - - - - - - -	20.2	17.6	16.1	17.2	17.7
Livestock Returns					
Per $100 feed fed1/ - - - - - -	$ 164	$ 176	$ 133	$ 152	$ 152
Hog returns per litter- - - -	168	172	191	171	179
Dairy returns per cow1/ - - - -	121	228	154	136	151
Labor Factors					
Labor cost per crop acre- - - -	$ 11.25	$ 15.43	$ 13.62	$ 10.63	$ 13.91
Labor units on crops- - - - - -	17.2	13.2	15.7	16.6	13.3
Labor units on livestock- - - -	8.6	21.3	17.8	12.2	15.6
Total labor units - - - - - -	25.8	34.5	33.5	28.7	28.8
Labor units per worker- - - - -	14.8	16.9	16.2	15.5	15.1
Other Expense Factors					
Horse and machinery cost per crop acre - - - - - - - -	$ 6.72	$ 9.59	$ 9.15	$ 6.18	$ 8.23
Land improvements cost per acre	.50	.74	.84	.59	.73
Buildings cost per acre - - - -	.53	1.09	.89	.65	.78
Land tax per acre - - - - - - -	.72	.75	.73	.69	.73

1/ Used in Table 3.

Source of Income

The grouping of accounting farms according to source of income gives each farmer an opportunity to compare his farm with the average of other farms having similar sources of income. It also gives him an opportunity to study investments, land use, crop yields, labor requirements, horse and machinery requirements, and other factors that are associated with various types of farming.

Interpretation of table. Each farmer should, however, use caution in interpreting the data in Table 5. For example, the fact that grain farms earned 16.6 percent on the investment for 1943 and that hog farms earned 10.5 percent does not mean that such a relationship will prevail over a long period of years. In 1942, the hog farms had the highest earnings and the dairy farms the lowest. The relative profitableness of enterprises is due largely to conditions affecting price and production.

In comparing the returns on the various groups of farms per $100 worth of feed fed, one should consider the fact that there is a wide variation in the needed returns per $100 worth of feed fed to pay for feed (including pasture), labor, equipment, buildings, and other costs. According to 5-year averages of complete cost studies (1933-1937), the necessary returns were: poultry, $195; dairy cattle, $157; hogs, $127 and feeder cattle, $117.

Labor. Although the labor cost per crop acre was highest on the dairy farms, where it averaged $15.43 and lowest on the general farms with the least livestock, where it averaged $10.63, the labor units per worker were not significantly different for the various groups. Labor units on crops, however, varied from 17.2 on the grain farms to 13.1 on the dairy farms; whereas, labor units on livestock ranged from 21.3 on the dairy farms to 8.9 on the grain farms.

Labor input per 100 crop acres was highest on the dairy farms, where 19.6 months of labor per 100 crop acres were used, and lowest on the general farms with the least livestock,where 13.8 months of labor were used. Two-man size farms predominated in the various groups, total months of labor varying from 20.9 on the grain farms to 24.8 on the hog farms.

Other expense factors. Horse and machinery cost per crop acre averaged $9.59 on the dairy farms and $6.18 on the general farms with the least livestock; land improvement cost per crop acre and building cost per crop acre were lowest on the grain farms where they averaged $.50 and $.53 respectively, and highest on the hog and dairy farms, where they averaged $.84 and $1.09 respectively. There was little variation in average land tax per acre.

Size of Farm

When average farm earnings are above the capitalization rate (5 percent is the usual rate used), large farms show higher labor and management earnings than small farms. Conversely, when average farm earnings are below the capitalization rate, large farms show a greater loss. In 1943, with farm earnings averaging 11.9 percent, the labor and management earnings on the 23 largest farms averaged $2886 contrasted with $1730 on the 31 smallest farms.

The rate earned on investment did not differ significantly for the various size groups.

TABLE 6.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 6, 1943

Item	Total acres in farm				
	Less than 121	121 to 200	201 to 280	281 to 360	361 or more
Number of farms	31	132	80	31	23
Acres per farm	101	167	239	318	449
Investments					
Total per farm	$12 469	$17 596	$20 923	$23 756	$32 825
Total per acre	123	105	88	75	73
Land improvements per acre	2.77	2.35	2.10	1.65	1.99
Buildings per acre[1]	17.99	13.34	11.05	7.63	7.69
Machinery per acre	16.42	12.78	9.81	8.20	6.98
Earnings					
Per farm					
Gross earnings	$ 4 171	$ 5 188	$ 6 219	$ 6 989	$ 8 500
Gross expenses	2 671	3 097	3 740	3 943	4 908
Net earnings	$ 1 500	$ 2 091	$ 2 479	$ 3 046	$ 3 592
Net earnings per acre	14.81	12.51	10.38	9.57	8.00
Rate earned on investment	12.0%	11.9%	11.8%	12.8%	10.9%
Labor and management earnings	$ 1 730	$ 2 125	$ 2 333	$ 2 804	$ 2 886
Size and Intensity					
Percent of land area tillable	86.5	84.1	81.9	74.1	73.7
Percent tillable land in grain	57.2	61.4	57.3	62.7	55.3
Percent in hay and pasture	39.5	33.6	33.9	29.9	35.7
Feed fed per acre to prod. l.s.	$ 21.30	$ 17.35	$ 15.91	$ 11.79	$ 11.27
Percent of income from prod. l.s.	85.2	83.9	85.6	81.3	77.9
Percent of income from crops	--	1.0	--	5.0	7.3
Months of labor per 100 crop A.	27.1	19.7	16.6	14.6	13.9
Total months of labor	18.9	21.6	24.6	26.5	32.5
Crop Yields per Acre					
Corn, bu.	39.5	37.3	34.3	32.7	35.1
Wheat, bu.	20.8	18.1	17.3	15.3	17.8
Livestock Returns					
Per $100 feed fed	$ 177	$ 161	$ 149	$ 160	$ 138
Hog returns per litter	171	184	180	173	196
Dairy returns per cow	203	187	181	205	172
Labor Factors					
Labor cost per crop acre	$ 20.98	$ 15.25	$ 13.10	$ 11.13	$ 10.58
Labor units on crops[1]	7.6	11.6	15.5	19.4	25.9
Labor units on livestock[1]	13.2	15.4	18.7	18.5	21.9
Total labor units[1]	20.8	27.0	34.2	37.9	47.7
Labor units per worker[1]	13.1	15.0	16.7	17.1	17.6
Other Expense Factors					
Horse and machinery cost per crop acre	$ 11.36	$ 9.11	$ 8.01	$ 7.41	$ 7.12
Land improvements cost per acre	.73	.85	.69	.66	.54
Buildings cost per acre[1]	1.50	1.04	.81	.58	.62
Land tax per acre	1.01	.80	.73	.65	.59

[1] Used in Table 3.

Intensity. The smaller farms were operated more intensively than were the larger ones. This variation was indicated by the larger proportion of total land tillable, by the higher land values, by the larger amount of feed fed per acre to productive livestock, and by higher corn and wheat yields.

Labor. As the size of the farms increased from less than 121 acres to 361 acres or more the labor cost per crop acre decreased from $20.98 to $10.58. On the other hand, labor units on crops increased more than 300 percent, from 7.6 to 25.9; labor units on livestock increased from 13.2 to 21.9; total labor units increased from 20.8 to 47.7; and labor units per worker increased from 13.1 to 17.6.

Other expense items. Expense per crop acre from the smallest to the largest size group decreased for horses and machinery from $11.36 to $7.12; for land improvements from $.73 to $.54; for buildings from $1.50 to $.62; and for land taxes from $1.01 to $.59.

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Labor and Horse and Machinery Expenses

Labor and horse and machinery expenses per crop acre increase as the amount of livestock per acre increases, but decrease as the size of farm increases. Therefore the efficiency of a farm in using labor and machinery should be determined by comparing the expenses on the individual farm with those of other farms of the same size having similar amounts of livestock per acre. The average labor cost per crop acre and the average horse and machinery cost per crop acre are shown for farms grouped according to acres per farm and value of feed fed per acre to productive livestock (Table 7).

TABLE 7.--LABOR COST PER CROP ACRE AND HORSE AND MACHINERY COST PER CROP ACRE FOR VARIATIONS IN SIZE OF FARM AND AMOUNT OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK
Accounting Farms in Farming-Type Area 6, 1943

Acres per farm	Feed fed per acre				Feed fed per acre			
	Less than $9.00	$9.00 to $14.99	$15.00 to $20.99	$21.00 or more	Less than $9.00	$9.00 to $14.99	$15.00 to $20.99	$21.00 or more
	(labor cost per crop acre)				(horse and machinery cost per crop acre)			
Less than 121	$14.43	$16.21	$17.49	$22.48	$9.66	$8.64	$10.96	$12.97
121 to 200	12.79	13.60	16.05	18.97	6.92	7.97	9.23	11.91
201 to 280	10.87	13.20	13.26	14.16	6.41	7.46	8.53	10.47
281 to 360	10.31	11.27	11.70	13.48	6.27	7.39	8.00	10.15
More than 360	9.60	10.85	10.99	12.00	6.00	7.00	7.25	8.16

Supplementary Labor Analysis

Labor units are used in this report to supplement the foregoing measures of labor efficiency.

A labor unit is essentially the same as a war unit. It is the approximate amount of time under average conditions that is required to take care of a dairy cow for one year or to do an equivalent amount of work with other livestock or crops. For example, the labor unit assumes that one dairy cow requires about as much work as 5.5 acres of corn, 8.3 acres of soybeans for grain, 14.3 acres of small grain or hay, 10 beef cows, 20 feeder cattle, 3 litters of pigs, 33 sheep, 160 feeder lambs, or 77 hens.

Obviously, no other computation of work units for the individual farmer will agree with those written in this report unless the acres and classification of crops as well as the numbers and kinds of livestock are the same as those recorded in the farm account book.

Labor Saving References

Labor simplification is suggested by the picture on the front cover of this report. For additional suggestions, ideas, and plans see your farm adviser or write directly to the University of Illinois, for the following publications:

Department of Agricultural Economics

"Making Your Labor Go Further," mimeograph AE-2182
"Feeding Cattle With Less Labor," AE-2169
"Making the Most of Available Labor," AE-2001

Emergency Farm Labor Office

"Making Food With Less Labor," printed leaflet

Department of Agricultural Engineering

"Hog Equipment," Circular 554
In addition, the Department of Agricultural Engineering supplies lists from which plans for labor saving devices, equipment, and structures may be selected.

Producing for War Needs

The account keeper should use the standards in this report to compare his own production with that of other account keepers. He should then adopt on his farm the kind of farm plan and the management practices that will make the best possible use of land, buildings, livestock, labor, machinery, and other resources for the duration of the war. Thus he will have more products to put on the nation's markets and so will be making the greatest possible contribution to the war effort.

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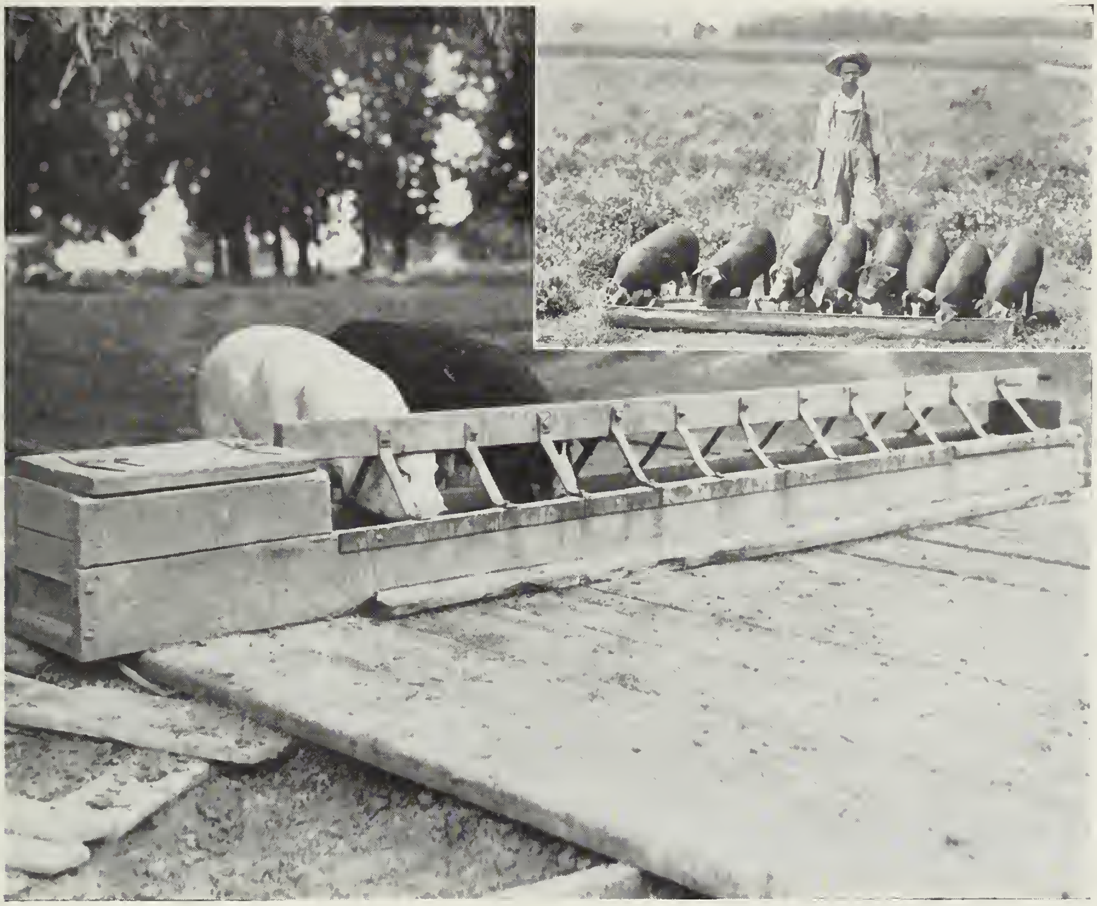
FARM BUSINESS REPORT . . . 1943



Labor-saving methods and devices lead to increased wartime production. This homemade waterer, which may be attached to a pressure system or to a tank wagon, is float controlled, requires little attention and provides fresh water at all times. Moreover, it is mudhole proof. Upper right — the hard way.

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FARMING-TYPE AREA SEVEN
South Central Mixed Farming Area

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
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Annual Farm Business Report

ON ONE HUNDRED TWENTY-FIVE FARMS IN FARMING-TYPE AREA 7, 1943

By J. B. Cunningham, J. E. Wills, and J. A. Snyder[1]

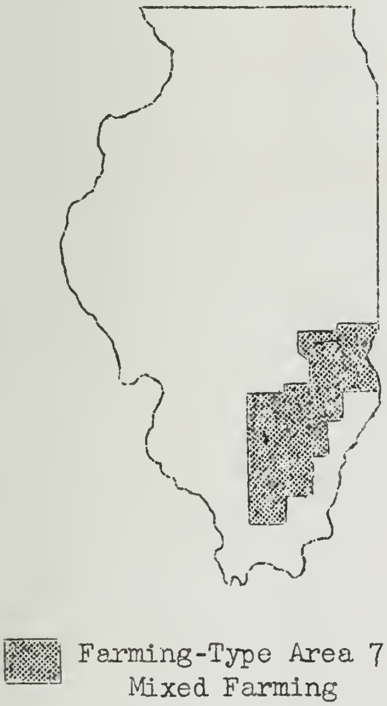
Production. Accounting farmers in Farming-Type Area 7 attempted to step-up production in 1943 over that of 1942 by increasing grain acreage, pigs, and hens.

Item	1942	1943	Change
Acres per farm	251	259	8 acres increase
Acres of grain crops	90	100	10 acres increase
Number of dairy cows	5	5	None
Number of pigs weaned	64	72	8 pigs increase
Number of hens	150	167	17 hens increase
Total months of labor	19.4	20.1	.7 month increase
Value of machinery (beginning of year)	$1 382	$1 568	$186 increase
Tons of grain produced	60	59	1 ton decrease
Measure of volume of production for livestock and livestock products[2]	$3 690	$3 678	$12 decrease

Although more labor was used in 1943 than in 1942, all the increase was in operator's and family labor which averaged 16 months in 1943 and 15.3 months in 1942. The same amount of hired labor (4.1 months) was used each year.

Increased machinery and equipment investments at the beginning of 1943 reflect 1942 purchases of movable hog houses, brooder houses, and other livestock equipment rather than large purchases of tillage tools.

Although there was an increase in grain acreage, grain produced per farm decreased from 60 tons in 1942 to 59 tons in 1943. This decrease was due to unfavorable weather which resulted in a reduction in yield per acre for corn, oats, and soybeans. Livestock production, as measured by receipts and net increases for livestock and livestock products which were valued at the same price for 1943 as for 1942, showed a slight decrease.



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[1] The project was conducted in cooperation with the county farm bureaus and was supervised by the following farm advisers: D. O. Lee, Jefferson; T. E. Myers, Clark; L. B. Kimmel, Wayne; F. J. Blackburn, Marion; W. C. Anderson, Franklin-Hamilton; R. E. Apple, Jasper; Halsey L. Miles, Crawford; E. J. Barnes, Richland; R. K. Wise, Clay; and L. B. Broom, Williamson.

[2] For 1942 actual receipts and net increases are used; for 1943 receipts and net increases are adjusted to the 1942 price level by dividing the 1943 receipts and net increases by the ratio of 1943 to 1942 Illinois farm price for each class of livestock and livestock product.

TABLE 1.--INVENTORY CHANGES, CASH INCOME, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 7, 1940-1943

Item	Your farm	Average of all farms in area			
		1943	1942	1941	1940
Inventory Changes					
Land improvements - - - - - - - - -	$	$ 67	$ 84	$) 61	$ 151
Farm buildings- - - - - - - - - - -		-11	-8	)	
Horses- - - - - - - - - - - - - - -		-17	-2	-60	-62
Productive livestock- - - - - - -		99	473	385	71
Feed, grain, and seeds- - - - - -		384	240	353	137
Machinery and equipment - - - - -		47	117	99	72
Automobile (farm share) - - - - -		-37	-20	27	15
Total - - - - - - - - - - - - - - -	$	$ 532	$ 884	$ 865	$ 384
Cash Receipts					
Land improvements - - - - - - - - -	$	$ 3	$ 1	$) 2	$ 14
Farm buildings- - - - - - - - - - -		1	1	)	
Horses- - - - - - - - - - - - - - -		57	38	64	75
Productive livestock: Cattle- - -		1 144	1 081	729	594
Dairy sales		412	381	370	290
Hogs- - - -		2 093	1 739	1 095	692
Sheep - - -		181	161	124	110
Poultry - -		201	148	114	104
Egg sales -		566	375	262	230
Total productive livestock- - - -	( )	(4 597)	(3 885)	(2 694)	(2 020)
Feed, grain, and seeds- - - - - -		1 147	840	763	530
Machinery and equipment - - - - -		132	149	162	127
Automobile (farm share) - - - - -		22	24	45	41
AAA receipts- - - - - - - - - - - -		343	188	168	226
Labor off farm- - - - - - - - - -		33	23	34	45
Miscellaneous - - - - - - - - - - -		3	3	20	14
Total - - - - - - - - - - - - - - -	$	$ 6 338	$ 5 152	$ 3 952	$ 3 092
Cash Expenses					
Land improvements - - - - - - - - -	$	$ 315	$ 256	$) 258	$ 311
Farm buildings- - - - - - - - - - -		145	131	)	
Horses- - - - - - - - - - - - - - -		35	31	17	33
Productive livestock: Cattle- - -		376	411	217	178
Hogs- - - -		89	141	64	39
Sheep - - -		67	72	21	14
Poultry - -		58	44	31	24
Total productive livestock- - - -	( )	(590)	(668)	(333)	(255)
Feed and grain purchases- - - - -		1 179	766	487	352
Crop and sealing expense- - - - -		162	120	143	102
Machinery and equipment - - - - -		863	826	676	498
Automobile (farm share) - - - - -		127	128	170	125
Livestock expense - - - - - - - -		58	49	27	24
Hired labor - - - - - - - - - - - -		324	276	239	161
Taxes - - - - - - - - - - - - - - -		182	168	164	148
Miscellaneous - - - - - - - - - - -		30	26	22	16
Total - - - - - - - - - - - - - - -	$	$ 4 010	$ 3 445	$ 2 536	$ 2 025
Summary					
Total inventory change- - - - - -	$	$ 532	$ 884	$ 865	$ 384
Cash balance- - - - - - - - - - - -		2 328	1 707	1 416	1 067
Farm products used in household -		400	334	292	244
Receipts less expenses- - - - - -	$	$ 3 260	$ 2 925	$ 2 573	$ 1 695
Total unpaid labor- - - - - - - -		1 172	853	678	618
Net earnings per farm - - - - - -	$	$ 2 088	$ 2 072	$ 1 895	$ 1 077
Net earnings per acre - - - - - -	$	$ 8.07	$ 8.24	$ 7.68	$ 4.35

TABLE 2.--INVESTMENTS AND EARNINGS
Accounting Farms in Farming-Type Area 7, 1940-1943

Item	Your farm	Average of all farms in area			
		1943	1942	1941	1940
Number of farms	--	125	147	121	98
Acres per farm	--	259	251	247	248
Capital Investments					
Land	$	$ 8 161	$ 8 091	$ 7 433	$ 7 504
Land improvements		692	592	)2 251	2 196
Farm buildings		1 813	1 711	)	
Horses		218	211	280	370
Productive livestock: Cattle		1 425	1 178	1 069	978
Hogs		691	458	287	304
Sheep		137	106	98	107
Poultry		183	149	117	129
Total productive livestock	( )	(2 436)	(1 891)	(1 571)	(1 518)
Feed, grain, and seeds		1 628	1 386	1 124	1 127
Machinery and equipment		1 568	1 382	1 300	1 193
Automobile (farm share)		265	258	170	127
Total	$	$16 781	$15 522	$14 129	$14 035
Receipts less expenses	$	$ 3 260	$ 2 925	$ 2 573	$ 1 695
Family labor		373	260	211	216
Returns for labor, capital, mgt.	$	$ 2 887	$ 2 665	$ 2 362	$ 1 479
Operator's labor		799	593	467	402
Net earnings per farm	$	$ 2 088	$ 2 072	$ 1 895	$ 1 077
Rate Earned on Investment	%	12.4%	13.3%	13.4%	7.7%
Interest on investment	$	$ 839	$ 776	$ 706	$ 702
Labor and Management Earnings		2 048	1 889	1 656	777

Net earnings. The net earnings per farm on an inventory basis were about the same in 1943 as in 1942; the average was $2 088 in 1943 compared with $2,072 in 1942. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. It is calculated by adding to the cash balance the value of farm products used in the household and the inventory increases and by subtracting from the resulting total the value of unpaid labor. Therefore this figure indicates the earning power of the business and determines the real value of the farm and its equipment. The net earnings per acre averaged $8.07 in 1943, $8.24 in 1942, $7.68 in 1941, and $4.35 in 1940.

Inventory changes. The year 1943 was the eleventh consecutive year in which inventories were increased. The increases for the past years ranged from $884 in 1942 to $384 in 1940 (Table 1). In 1943 the largest value increases were for feed, grain, and seeds even though there was no significant increase in quantities. The average amounts of grain on hand in Area 7 at the two inventory periods were:

Crop	Beginning of year (bushels)	End of year (bushels)
Corn	1,043	1,094
Oats	227	180
Wheat	54	68
Soybeans	92	69

TABLE 3.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 7, 1943

Item	Your farm	Standards for your farm	Average of 125 farms
Rate earned on investment	______%	12.4%	12.4%
Number of farms	--	--	125
Acres in farm	______	259	259
Acres in crops	______	148	148
Gross earnings per acre	$______	$______a/	$ 19.63
Gross expenses per acre			11.56
Investments			
Value of land per acre	$______	$ 32	$ 32
Value of improved land per acre	______	______a/	33
Value of buildings per acre	______	______e/	7
Total investment per acre		65	65
Land Use			
Percent of land area tillable	______	______a/	83.8
Percent of tillable land in:			
Corn	______	______	22.0
Oats	______	______	7.1
Wheat	______	______	8.0
Soybeans	______	______	8.8
Other crops	______	______	9.7
Legume hay and pasture	______	______	21.1
Nonlegume hay and pasture			23.3
Crop Yields			
Corn	______	______b/	32.0
Oats	______	______	18.2
Wheat	______	14.7	14.7
Soybeans		b/	11.8
Livestock Factors			
Value of feed fed to prod. l.s.	$______	$2 899	$2 899
Feed fed per acre to prod. l.s.	______	______c/	11.20
Returns per $100 worth of feed fed	______	______	153
Poultry returns per hen	______	4.92	4.92
Number of litters farrowed	______	12	12
Number of pigs weaned per litter	______	6.0	6.0
Returns per litter farrowed	$______	$ 181	$ 181
Average number of cows milked	______	4.9	4.9
Dairy returns per cow milked	$	$ c/	$ 109
Labor Factors			
Labor cost per crop acre	$______	$______d/	$ 9.87
Labor units on crops	______	______e/	16.7
Labor units on livestock	______	______	12.7
Total labor units	______	______	29.4
Total months of labor	______	______	20.1
Labor units per worker			17.5
Other Expense Factors			
Horse and machinery cost per crop acre	$______	$______d/	$ 6.44
Land improvements cost per acre	______	.95	.95
Buildings cost per acre	______	______e/	.60
Land tax per acre		a/	.58

a/ Table 4, value of improved land.

b/ Fig. 1, value of improved land.

c/ Table 5, source of income.

d/ Table 7, size of farm and value of feed fed per acre.

e/ Table 6, size of farm.

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS

Accounting Farms in Farming-Type Area 7, 1943

The numbers above the double line are the averages for the farms similar in organization to your farm. By drawing a line across each column at the place which measures the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

			Factors that affect the gross earnings										Factors that affect expenses		
				Crop yields											
Rate earned on investment, percent	Acres in farm	Gross earnings per acre	Percent of tillable land in legume hay and pasture	Corn, bu.	Oats, bu.	Soybeans, bu.	Feed fed per acre to prod. l.s.	Returns per $100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked	Gross expense per acre	Horse and machinery cost per crop acre	Labor cost per crop acre	Buildings cost per acre
27.4	509								7.42	231					
24.4	459								6.92	221					
21.4	409								6.42	211					
18.4	359								5.92	201					
15.4	309								5.42	191					
12.4	259								4.92	181					
9.4	209								4.42	171					
6.4	159								3.92	161					
3.4	109								3.42	151					
--	59								2.92	141					
--	--								2.42	131					
* 3%	50	$3	3%	4bu.	4bu.	2bu.	$3	$20	$.50	$10	$10	$1	$1	$1	$.20

*Each space between lines represents the value indicated at bottom of each column.

TABLE 4.--USE OF TILLABLE LAND AND OTHER FACTORS RELATED TO THE VALUE OF IMPROVED LAND
Accounting Farms in Farming-Type Area 7, 1943

Item	Value of improved land			
	Less than $26	$26 to $35	$36 to $45	$46 or more
Average value of improved land- - - -	$22	$31	$40	$57
Number of farms - - - - - - - - - - - -	34	45	28	18
Acres per farm- - - - - - - - - - - - -	297	270	211	233
Percent of land area tillable - - - -	82.5	85.8	84.0	80.8
Percent of tillable land in:				
Corn- - - - - - - - - - - - - - - - -	17.2	20.9	26.3	30.4
Oats- - - - - - - - - - - - - - - - -	7.5	8.2	6.1	4.0
Wheat - - - - - - - - - - - - - - - -	6.6	8.9	8.0	8.9
Soybeans- - - - - - - - - - - - - - -	7.7	6.5	13.0	12.8
Other crops - - - - - - - - - - - - -	10.4	9.1	9.1	11.2
Legume hay and pasture- - - - - - - -	21.5	22.1	19.8	15.3
Nonlegume hay and pasture - - - - -	29.1	24.3	17.7	17.4
Gross earnings per acre - - - - - - -	$13.78	$19.74	$23.43	$28.51
Gross expenses per acre - - - - - - -	9.74	11.51	13.79	13.40
Net earnings per acre - - - - - - - -	$ 4.04	$ 8.23	$ 9.64	$15.11
Land tax per acre - - - - - - - - - -	$ .51	$ .52	$ .66	$ .78

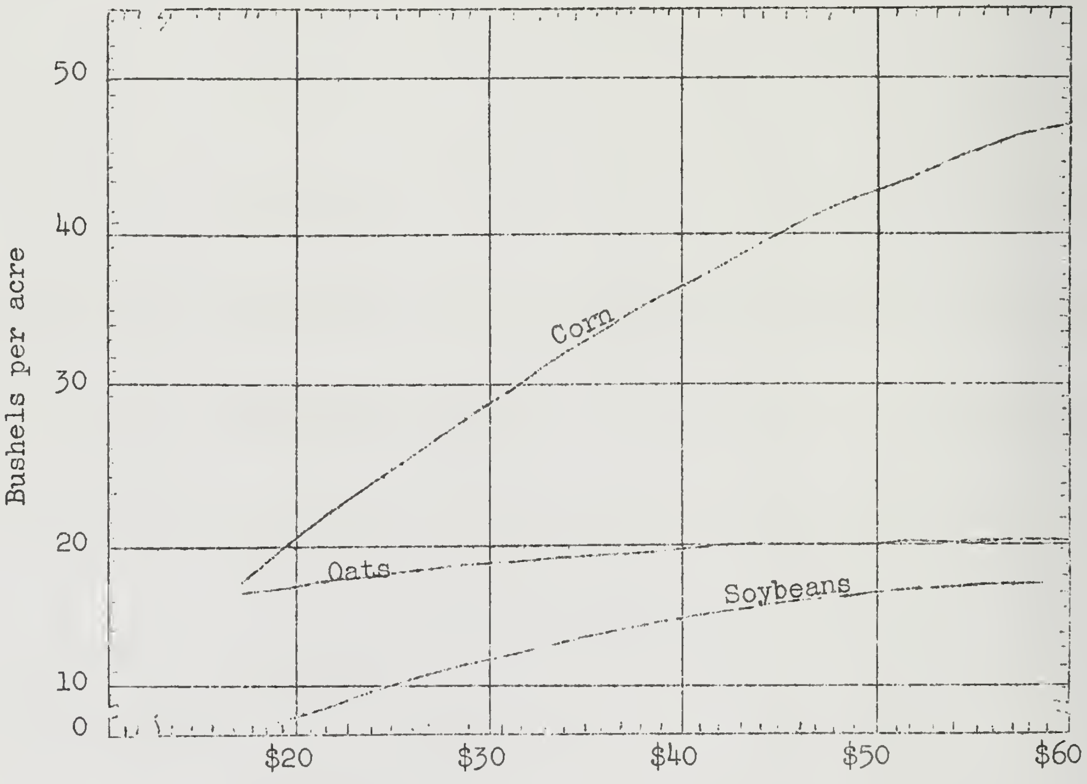

Fig. 1.--Average yields of corn, oats, and soybeans with varying values of improved land.

Unpaid family labor. The total valuation of unpaid labor was higher for 1943 than for any other year in the past four. This increase resulted principally from the fact that the physical labor of the operator and other members of the family was valued at prevailing farm wages which were approximately $70 per month in 1943, $55 per month in 1942, $45 per month in 1941, and $40 per month in 1940.

Variation in farm earnings. A wide variation was found in earnings on the farms in Area 7. For example, 25 farms earned less than five percent on their investment; but 20 farms earned 20 percent or more. After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had $339 for their labor and management earnings contrasted with $4,054 for the latter group. The variation in earnings for all the records in the area was as follows:

Rate earned on investment (percent)	Number of farms	Average rate earned (percent)	Acres per farm	Capital invested per farm	Gross earnings per farm	Net earnings per farm	Labor and management earnings
Less than 5.00	25	2.1	257	$15 319	$4 035	$ 318	$ 339
5.00 to 9.99	31	7.4	281	17 849	4 010	1 328	1 237
10.00 to 14.99	27	12.5	246	16 358	5 360	2 046	1 990
15.00 to 19.99	20	18.0	262	18 752	7 159	3 385	3 316
20.00 or more	20	25.8	243	15 666	6 993	4 048	4 054

Explanation of Tables

Variable standards are used in analyzing the farm business (Table 2). They make allowances for the following facts: (1) that the quality of land affects the cropping system and the crop yields; (2) that the kind of livestock influences the amount of feed fed and the returns per $100 worth of feed fed; (3) that the size and intensity of the farm business affects practically all the cost items; and (4) that price relationships and quantities of the products produced affect the relative profitableness of various types of farming for any particular year.

The terms used in the tables are the same as the terms used in the Illinois farm account book. For example, "improved land" is classified on Page 1 of the farm account book. It means crop land, tillable pasture, and land occupied by farmstead, roads, and lanes. Likewise, "crop acres" are listed on page 20 of the farm account book. They include all the tillable land on which a large amount of work has been done in preparing a seedbed or in cultivating or harvesting a crop.

(Note: A labor unit is explained on page 11).

Land Use and Crop Yields

The percent of tillable land in grain crops increased as the value per acre for improved land increased (Table 4). Likewise, the earnings per acre and the land tax per acre increased as the value of improved land increased. On the other hand, the percent of tillable land in legume and nonlegume hay and pasture decreased as the value of the land increased.

Yields per acre for corn, oats, and soybeans increased as the land value increased (Fig. 1). By using Table 4 and Figure 1, the account keeper may find out whether his acreage in various crops, crop yields, and earnings per acre were high or low in comparison with the average of other farms in his area having about the same value of improved land.

TABLE 5.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 7, 1943

Item	Source of income				
				General farms	
	Grain 35% +	Hogs 40% +	Cattle 40% +	L.S. 60%-	L.S. 60% +
Number of farms	8	48	4	13	52
Percent of income from prod. l.s.	39.4	87.0	87.2	53.8	82.8
Percent of income from crops	47.9	--	--	24.6	--
Investments					
Total per farm	$17 080	$17 813	$31 460	$14 201	$15 299
Total per acre	52	68	81	58	64
Land per acre	28	33	38	33	30
Land improvements per acre	2.10	2.77	3.80	2.16	2.69
Buildings per acre	5.10	7.08	9.33	5.38	7.46
Machinery per acre	6.24	7.85	8.02	5.35	6.82
Earnings					
Per farm					
Gross earnings	$ 6 092	$ 5 964	$ 7 179	$ 3 870	$ 4 484
Gross expenses	2 914	3 503	4 392	2 342	2 819
Net earnings	$ 3 178	$ 2 461	$ 2 787	$ 1 528	$ 1 665
Net earnings per acre	9.65	9.45	7.19	6.27	6.92
Rate earned on investment	18.6%	13.8%	8.9%	10.8%	10.9%
Labor and management earnings	$ 3 097	$ 2 382	$ 2 044	$ 1 644	$ 1 681
Size and Intensity					
Acres per farm	330	260	388	244	240
Percent of land area tillable	87.0	82.6	84.7	86.1	83.7
Percent tillable land in grain	55.3	51.0	32.8	47.9	45.5
Percent in hay and pasture	37.7	42.3	60.8	43.7	46.3
Feed fed per acre to prod. l.s.[1]	$ 5.21	$ 14.45	$ 12.89	$ 6.25	$ 10.27
Months of labor per 100 crop A.	9.0	14.6	11.1	11.3	14.6
Total months of labor	20.5	21.1	21.6	16.3	20.0
Crop Yields Per Acre					
Corn, bu.	30.1	38.9	35.4	26.8	26.0
Wheat, bu.	13.8	15.4	15.9	13.3	14.2
Livestock Returns					
Per $100 feed fed[1]	$ 157	$ 146	$ 130	$ 159	$ 164
Hog returns per litter	163	195	147	139	187
Dairy returns per cow[1]	99	101	69	93	117
Labor Factors					
Labor cost per crop acre	$ 6.13	$ 10.83	$ 8.13	$ 8.02	$ 10.57
Labor units on crops	25.1	16.6	21.6	16.6	15.2
Labor units on livestock	9.6	13.2	12.8	9.2	13.6
Total labor units	34.8	29.8	34.4	25.8	28.8
Labor units per worker	20.3	16.9	19.1	19.0	17.2
Other Expense Factors					
Horse and machinery cost per crop acre	$ 4.80	$ 7.66	$ 4.22	$ 5.39	$ 6.18
Land improvements cost per acre	.51	1.10	.86	.71	.96
Buildings cost per acre	.34	.68	.53	.50	.60
Land tax per acre	.49	.60	.68	.55	.57

[1] Used in Table 3.

Source of Income

The grouping of accounting farms according to source of income gives each farmer an opportunity to compare his farm with the average of other farms having similar sources of income. It also gives him an opportunity to study investments, land use, crop yields, labor requirements, horse and machinery requirements, and other factors that are associated with various types of farming.

Interpretation of table. Each farmer should, however, use caution in interpreting the data in Table 5. For example, the fact that grain farms earned 18.6 percent on the investment for 1943 and cattle farms earned 8.9 percent does not mean that such a relationship will prevail over a long period of years. The relative profitableness of enterprises is due largely to conditions affecting price and production.

In comparing the returns on the various groups of farms per $100 worth of feed fed, one should consider the fact that there is a wide variation in the needed returns per $100 worth of feed fed to pay for feed (including pasture), labor, equipment, buildings, and other costs. According to 5-year averages of complete cost studies (1933-1937), the necessary returns were: poultry, $195; dairy cattle, $157; hogs, $127 and feeder cattle, $117.

Labor. Labor cost per crop acre varied from $6.13 on the grain farms to $10.83 on the hog farms; whereas, labor units per worker varied oppositely from 16.9 units on the hog farms to 20.3 on the grain farms. Variation between groups was far greater in labor units on crops than in labor units on livestock.

Labor input per 100 crop acres was lowest on the grain farms, where 9 months of labor per 100 acres were used, and highest on the hog and general farms with the most livestock, where 14.6 months of labor were used. Except for the general farms with the least livestock, there was little difference among the five groups in the total months of labor.

Other expense factors. Horse and machinery cost per crop acre averaged $4.22 on the cattle farms and $7.66 on the hog farms; land improvements cost per acre and buildings cost per acre were lowest on the grain farms where they averaged $.51 and $.34 respectively, and highest on the hog farms, where they averaged $1.10 and $.68 respectively.

Size of Farm

When average farm earnings are above the capitalization rate (5 percent is the usual rate used), large farms usually show higher labor and management earnings than small farms. Conversely, when average farm earnings are below the capitalization rate, large farms show a greater loss. In 1943, with farm earnings averaging 12.4 percent, the labor and management earnings on the 35 largest farms averaged $2346 contrasted with $1427 on the 17 smallest farms.

The rate earned on investment did not show any consistent variation due to size of the farm.

TABLE 6.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 7, 1943

Item	Total acres in farm			
	Less than 141	141 to 220	221 to 300	301 or more
Number of farms	17	40	33	35
Acres per farm	105	186	258	417
Investments				
Total per farm	$ 8 056	$13 405	$17 577	$24 127
Total per acre	76	72	68	58
Land improvements per acre	3.03	2.88	2.85	2.43
Buildings per acre1/	10.00	6.28	7.92	6.47
Machinery per acre	8.15	7.77	7.49	6.36
Earnings				
Per farm				
Gross earnings	$ 3 472	$ 3 994	$ 5 713	$ 6 803
Gross expenses	2 397	2 443	3 146	4 059
Net earnings	$ 1 075	$ 1 551	$ 2 567	$ 2 744
Net earnings per acre	10.22	8.32	9.95	6.58
Rate earned on investment	13.3%	11.6%	14.6%	11.4%
Labor and management earnings	$ 1 427	$ 1 707	$ 2 467	$ 2 346
Size and Intensity				
Percent of land area tillable	85.5	83.9	85.8	82.4
Percent tillable land in grain	50.1	51.3	53.0	43.1
Percent in hay and pasture	42.4	39.3	41.4	49.3
Feed fed per acre to prod. l.s.	$ 18.10	$ 12.40	$ 12.69	$ 8.87
Percent of income from prod. l.s.	81.5	81.6	76.9	79.7
Percent of income from crops	--	1.5	8.6	6.5
Months of labor per 100 crop A.	21.5	15.9	13.5	11.3
Total months of labor1/	13.0	17.6	21.1	25.5
Crop Yields per Acre				
Corn, bu.	33.1	30.2	33.7	31.8
Wheat, bu.	15.3	11.9	15.4	15.7
Livestock Returns				
Per $100 feed fed	$ 162	$ 154	$ 145	$ 156
Hog returns per litter	226	180	189	176
Dairy returns per cow	97	91	130	112
Labor Factors				
Labor cost per crop acre	$ 15.11	$ 11.54	$ 9.76	$ 8.32
Labor units on crops1/	7.1	12.9	18.3	24.3
Labor units on livestock1/	9.1	11.4	13.5	15.2
Total labor units1/	16.2	24.3	31.8	39.5
Labor units per worker1/	15.0	16.5	18.1	18.6
Other Expense Factors				
Horse and machinery cost per crop acre	$ 8.52	$ 6.84	$ 6.56	$ 5.85
Land improvements cost per acre	.94	.99	.93	.94
Buildings cost per acre1/	.78	.61	.71	.51
Land tax per acre	.73	.62	.59	.53

1/ Used in Table 3.

Intensity. The smaller farms were operated more intensively than were the larger ones. This variation was indicated by the larger amount of feed fed per acre to productive livestock, and by more months of labor per 100 crop acres.

Labor. As the size of the farms increased from less than 141 acres to 301 acres or more, the labor cost per crop acre decreased from $15.11 to $8.32. On the other hand, labor units on crops increased from 7.1 to 24.3; labor units on livestock increased from 9.1 to 15.2; total labor units increased from 16.2 to 39.5; and labor units per worker increased from 15.0 to 18.6.

Other expense items. Expense per crop acre from the smallest to the largest size group decreased for horses and machinery from $8.52 to $5.85; for buildings from $.78 to $.51 and for land taxes from $.73 to $.53.

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Labor and Horse and Machinery Expenses

Labor and horse and machinery expenses per crop acre increase as the amount of livestock per acre increases, but decrease as the size of farm increases. Therefore the efficiency of a farm in using labor and machinery should be determined by comparing the expenses on the individual farm with those of other farms of the same size having similar amounts of livestock per acre. The average labor cost per crop acre and the average horse and machinery cost per crop acre are shown for farms grouped according to acres per farm and value of feed fed per acre to productive livestock (Table 7).

TABLE 7.--LABOR COST PER CROP ACRE AND HORSE AND MACHINERY COST PER CROP ACRE FOR VARIATIONS IN SIZE OF FARM AND AMOUNT OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK
Accounting Farms in Farming-Type Area 7, 1943

Acres per farm	Feed fed per acre				Feed fed per acre			
	Less than $7.00	$7.00 to $11.99	$12.00 to $16.99	$17.00 or more	Less than $7.00	$7.00 to $11.99	$12.00 to $16.99	$17.00 or more
	(labor cost per crop acre)				(horse and machinery cost per crop acre)			
Less than 141	$12.57	$13.93	$16.52	$17.59	$7.05	$8.00	$9.59	$10.50
141 to 220	10.79	10.92	11.42	13.34	6.00	6.24	8.69	9.20
221 to 300	7.51	9.46	10.89	11.98	4.75	5.64	8.00	8.21
301 or more	5.67	9.00	9.33	11.00	4.00	6.00	6.21	7.41

Supplementary Labor Analysis

Labor units are used in this report to supplement the foregoing measures of labor efficiency.

A labor unit is essentially the same as a war unit. It is the approximate amount of time under average conditions that is required to take care of a dairy cow for one year or to do an equivalent amount of work with other livestock or crops. For example, the labor unit assumes that one dairy cow requires about as much work as 5.5 acres of corn, 8.3 acres of soybeans for grain, 14.3 acres of small grain or hay, 10 beef cows, 20 feeder cattle, 3 litters of pigs, 33 sheep, 160 feeder lambs, or 77 hens.

Obviously, no other computation of work units for the individual farmer will agree with those written in this report unless the acres and classification of crops as well as the numbers and kinds of livestock are the same as those recorded in the farm account book.

Labor Saving References

Labor simplification is suggested by the picture on the front cover of this report. For additional suggestions, ideas, and plans see your farm adviser or write directly to the University of Illinois, for the following publications:

Department of Agricultural Economics

"Making Your Labor Go Further," mimeograph AE-2182
"Feeding Cattle With Less Labor," AE-2169
"Making the Most of Available Labor," AE-2001

Emergency Farm Labor Office

"Making Food With Less Labor," printed leaflet

Department of Agricultural Engineering

"Hog Equipment," Circular 554
In addition, the Department of Agricultural Engineering supplies lists from which plans for labor saving devices, equipment, and structures may be selected.

Producing for War Needs

The account keeper should use the standards in this report to compare his own production with that of other account keepers. He should then adopt on his farm the kind of farm plan and the management practices that will make the best possible use of land, buildings, livestock, labor, machinery, and other resources for the duration of the war. Thus he will have more products to put on the nation's markets and so will be making the greatest possible contribution to the war effort.

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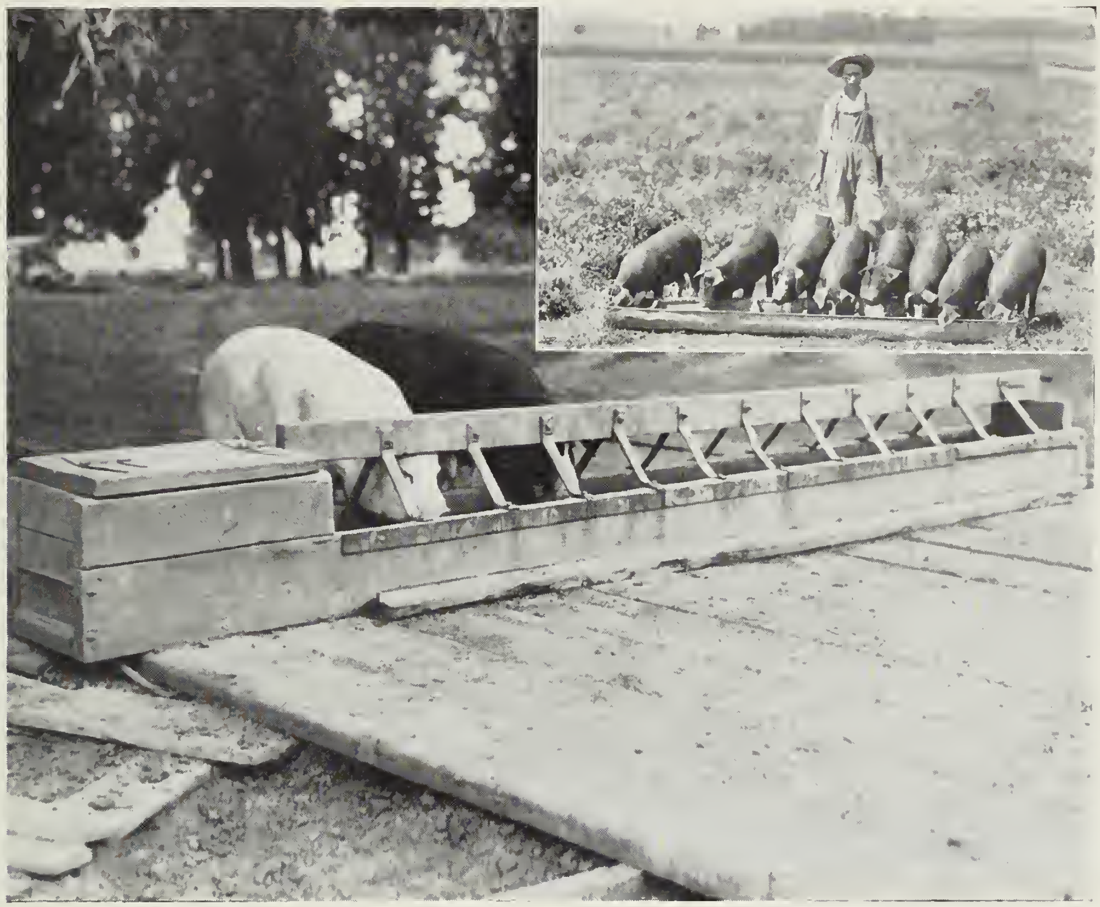
FARM BUSINESS REPORT . . . 1943



Labor-saving methods and devices lead to increased wartime production. This homemade waterer, which may be attached to a pressure system or to a tank wagon, is float controlled, requires little attention and provides fresh water at all times. Moreover, it is mudhole proof. Upper right — the hard way.

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FARMING-TYPE AREA EIGHT
Wabash Valley Grain and Livestock Area

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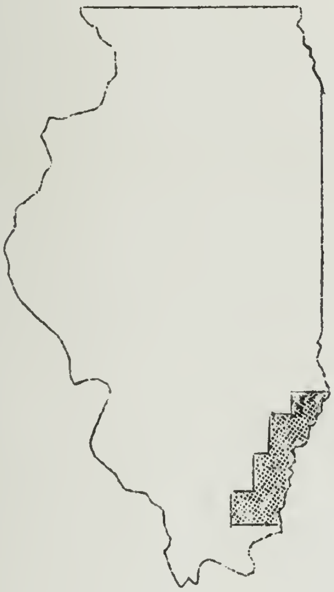
Annual Farm Business Report

ON SEVENTY-SEVEN FARMS IN FARMING-TYPE AREA 8, 1943

By J. B. Cunningham, J. E. Wills, B. D. Parrish[1]

Production. Accounting farmers in Farming-Type Area 8 attempted to step-up production in 1943 over that of 1942 by increasing grain acreage and numbers of cows, pigs and hens.

Item	1942	1943	Change
Acres per farm	218	238	20 acres increase
Acres of grain crops	106	113	7 acres increase
Number of dairy cows	3	4	1 cow increase
Number of pigs weaned	75	93	18 pigs increase
Number of hens	171	183	12 hens increase
Total months of labor	20.2	20.9	.7 month increase
Value of machinery (beginning of year)	$1 390	$1 676	$286 increase
Tons of grain produced	90	83	7 tons decrease
Measure of volume of production for livestock and livestock products[2]	$3 772	$4 197	$425 increase



▨ Farming-Type Area 8
Grain and Livestock

Although the cooperators used slightly more labor in 1943 than in 1942, they hired less help but had more operator's and family labor.

Increased machinery investments reflect 1942 purchases of movable hog houses, brooder houses, and other livestock equipment rather than large purchases of tillage tools.

Grain produced per farm decreased from 90 tons in 1942 to 83 tons in 1943 because spring floods and unfavorable weather decreased yields per acre for corn, soybeans, and oats. On the other hand, production of livestock increased as measured by receipts and net increases for livestock and livestock products, valued at the same price for 1943 as for 1942.

1/ J. A. Snyder supervised the closing of the farm accounts and the preparation of the tables used in this report. The project was conducted in cooperation with the county farm bureaus and was supervised by the following farm advisers: J. L. Diamond, Edwards, A. L. Oxford, Gallatin; H. C. Wheeler, Lawrence; Thurman Wright, White; and H. H. Lett, Wabash.

2/ The 1942 actual receipts and net increases were used; for 1943, receipts and net increases were adjusted to the 1942 price level by dividing the 1943 receipts and net increases by the ratio of 1943 to 1942 Illinois farm prices for each class of livestock or livestock product.

TABLE 1.--INVENTORY CHANGES, CASH INCOME, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 8, 1940-1943

Item	Your farm	Average of all farms in area 1943	1942	1941	1940
Inventory Changes					
Land improvements - - - - - - - -	$	$ 55	$ 64	$) 69	$ 15
Farm buildings- - - - - - - - - -		-17	8	)	
Horses- - - - - - - - - - - - - -		-20	-12	-36	-42
Productive livestock- - - - - -		232	554	512	59
Feed, grain, and seeds- - - - -		279	379	496	360
Machinery and equipment - - - -		-16	144	140	64
Automobile (farm share) - - - -		-38	-31	60	21
Total - - - - - - - - - - - - - -	$	$ 475	$ 1 106	$ 1 241	$ 477
Cash Receipts					
Land improvements - - - - - - - -	$	$ --	$ 1	$) 8	$ 8
Farm buildings- - - - - - - - - -		3	13	)	
Horses- - - - - - - - - - - - - -		59	46	33	39
Productive livestock: Cattle- -		1 372	1 080	776	646
Dairy sales		324	241	245	161
Hogs- - -		2 566	2 005	1 164	686
Sheep - -		78	102	87	67
Poultry -		180	110	92	74
Egg sales		638	467	282	206
Total productive livestock- - -	( )	(5 158)	(4 005)	(2 646)	(1 840)
Feed, grain, and seeds- - - - -		1 873	1 430	1 195	1 062
Machinery and equipment - - - -		147	216	158	166
Automobile (farm share) - - - -		29	14	76	21
AAA receipts- - - - - - - - - -		410	307	184	339
Labor off farm- - - - - - - - -		25	27	29	31
Miscellaneous - - - - - - - - - -		5	2	7	14
Total - - - - - - - - - - - - - -	$	$ 7 709	$ 6 061	$ 4 336	$ 3 520
Cash Expenses					
Land improvements - - - - - - - -	$	$ 327	$ 238	$) 272	$ 203
Farm buildings- - - - - - - - - -		150	153	)	
Horses- - - - - - - - - - - - - -		44	35	18	17
Productive livestock: Cattle- -		548	573	388	273
Hogs- - -		124	138	77	47
Sheep - -		9	39	9	10
Poultry -		51	37	29	23
Total productive livestock- - -	( )	(732)	(787)	(503)	(353)
Feed and grain purchases- - - -		1 116	684	489	371
Crop and sealing expense- - - -		207	138	139	116
Machinery and equipment - - - -		798	883	702	625
Automobile (farm share) - - - -		104	97	239	124
Livestock expense - - - - - - -		39	39	23	18
Hired labor - - - - - - - - - -		411	333	237	187
Taxes - - - - - - - - - - - - -		223	201	205	204
Miscellaneous - - - - - - - - - -		28	23	17	22
Total - - - - - - - - - - - - - -	$	$ 4 179	$ 3 611	$ 2 844	$ 2 240
Summary					
Total inventory change- - - - -	$	$ 475	$ 1 106	$ 1 241	$ 477
Cash balance- - - - - - - - - -		3 530	2 450	1 492	1 280
Farm products used in household		377	317	267	211
Receipts less expenses- - - - -	$	$ 4 382	$ 3 873	$ 3 000	$ 1 968
Total unpaid labor- - - - - - -		1 139	815	646	574
Net earnings per farm - - - - -	$	$ 3 243	$ 3 058	$ 2 354	$ 1 394
Net earnings per acre - - - - -	$	$ 13.65	$ 14.05	$ 10.65	$ 6.15

TABLE 2.--INVESTMENTS AND EARNINGS
Accounting Farms in Farming-Type Area 8, 1940-1943

Item	Your farm	Average of all farms in area			
		1943	1942	1941	1940
Number of farms	--	77	92	80	57
Acres per farm		238	218	221	227
Capital Investments					
Land	$	$10 841	$ 9 384	$ 8 951	$10 378
Land improvements		562	502	2 039	2 087
Farm buildings		2 065	1 744		
Horses		257	241	286	349
Productive livestock: Cattle		1 466	1 050	869	772
Hogs		813	522	279	276
Sheep		78	86	73	80
Poultry		183	152	123	130
Total productive livestock	( )	(2 540)	(1 810)	(1 344)	(1 258)
Feed, grain, and seeds		2 402	1 794	1 333	1 217
Machinery and equipment		1 676	1 390	1 205	1 283
Automobile (farm share)		224	239	167	144
Total	$	$20 567	$17 104	$15 325	$16 716
Receipts less expenses	$	$ 4 382	$ 3 873	$ 3 000	$ 1 968
Family labor		325	227	178	155
Returns for labor, capital, mgt.	$	$ 4 057	$ 3 646	$ 2 822	$ 1 813
Operator's labor		814	588	468	419
Net earnings per farm	$	$ 3 243	$ 3 058	$ 2 354	$ 1 394
Rate Earned on Investment	%	15.8%	17.9%	15.4%	8.3%
Interest on investment	$	$ 1 028	$ 855	$ 766	$ 836
Labor and Management Earnings		3 029	2 791	2 056	977

Net earnings. The net earnings per farm on an inventory basis were slightly higher in 1943 than in 1942; the average was $3,243 in 1943 compared with $3,058 in 1942. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. The average net earnings per acre were $13.65 in 1943, $14.05 in 1942, $10.65 in 1941, and $6.15 in 1940.

Inventory changes. The year 1943 was the eighth consecutive year in which inventories increased. The largest increase for the past four years was $1,241 in 1941 and the smallest was $475 in 1943 (Table 1). In 1943 the largest value increases were for livestock and feed, grain, and seeds even though quantities of grain decreased. The average amounts of grain on hand in Area 8 at the two inventory periods were:

Crop	Beginning of year 1943 (bushels)	End of year 1943 (bushels)
Corn	1 834	1 562
Oats	255	188
Wheat	93	65
Soybeans	162	82

Cash receipts and cash expenses. In 1943 cash receipts exceeded cash expenses by $3,530, the largest margin for any year in the past four. The cash balance--the difference between cash receipts and expenses--is the amount of money which was available for family living expenses, interest, debt payments, and savings.

TABLE 3.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 8, 1943

Item	Your farm	Standards for your farm	Average of 77 farms
Rate earned on investment- - - - - - - -	______%	15.8%	15.8%
Acres in farm- - - - - - - - - - - - - - -	______	238	238
Acres in crops - - - - - - - - - - - - - -	______	143	143
Gross earnings per acre- - - - - - - - - -	$______	$______ a/	$ 26.54
Gross expenses per acre- - - - - - - - - -			12.89
Investments			
Value of land per acre - - - - - - - -	$______	$ 46	$ 46
Value of improved land per acre- - - -	______	______ a/	48
Value of buildings per acre- - - - - -	______	______ e/	9
Total investment per acre- - - - - - -		87	87
Land Use			
Percent of land area tillable- - - - -	______	______ a/	84.9
Percent of tillable land in:			
Corn - - - - - - - - - - - - - - - - -	______	______	29.1
Oats - - - - - - - - - - - - - - - - -	______	______	5.5
Wheat- - - - - - - - - - - - - - - - -	______	______	11.3
Soybeans - - - - - - - - - - - - - - -	______	______	9.8
Other crops- - - - - - - - - - - - - -	______	______	12.7
Legume hay and pasture - - - - - - - -	______	______	19.8
Nonlegume hay and pasture- - - - - - -			11.8
Crop Yields			
Corn, bu.- - - - - - - - - - - - - - - -	______	______ b/	37.5
Oats, bu.- - - - - - - - - - - - - - - -	______	______	24.1
Wheat, bu. - - - - - - - - - - - - - - -	______	______	18.6
Soybeans, bu.- - - - - - - - - - - - - -		12.5	12.5
Livestock Factors			
Value of feed fed to prod. l.s.- - - -	$______	$3 352	$3 352
Feed fed per acre to prod. l.s.- - - -	______	______ c/	14.11
Returns per $100 worth of feed fed - -	______	______	148
Poultry returns per hen- - - - - - - -	______	4.80	4.80
Number of litters farrowed - - - - - -	______	14	14
Number of pigs weaned per litter - - -	______	6.6	6.6
Returns per litter farrowed- - - - - -	$______	$ 192	$ 192
Average number of cows milked- - - - -	______	4	4
Dairy returns per cow milked - - - - -	$	$ c/	$ 109
Labor Factors			
Labor cost per crop acre - - - - - - -	$______	$______ d/	$ 10.71
Labor units on crops - - - - - - - - -	______	______ e/	16.7
Labor units on livestock - - - - - - -	______	______	12.6
Total labor units- - - - - - - - - - -	______	______	29.3
Total months of labor- - - - - - - - -	______	______	20.9
Labor units per worker - - - - - - - -			17.1
Other Expense Factors			
Horse and machinery cost per crop acre	$______	$______ d/	$ 6.54
Land improvements cost per acre- - - -	______	1.15	1.15
Buildings cost per acre- - - - - - - -	______	______ e/	.69
Land tax per acre- - - - - - - - - - -		a/	.76

a/ Table 4, value of improved land.
b/ Fig. 1, value of improved land.
c/ Table 5, source of income
d/ Table 7, size of farm and value of feed fed per acre.
e/ Table 6, size of farm.

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS

Accounting Farms in Farming-Type Area 8, 1943

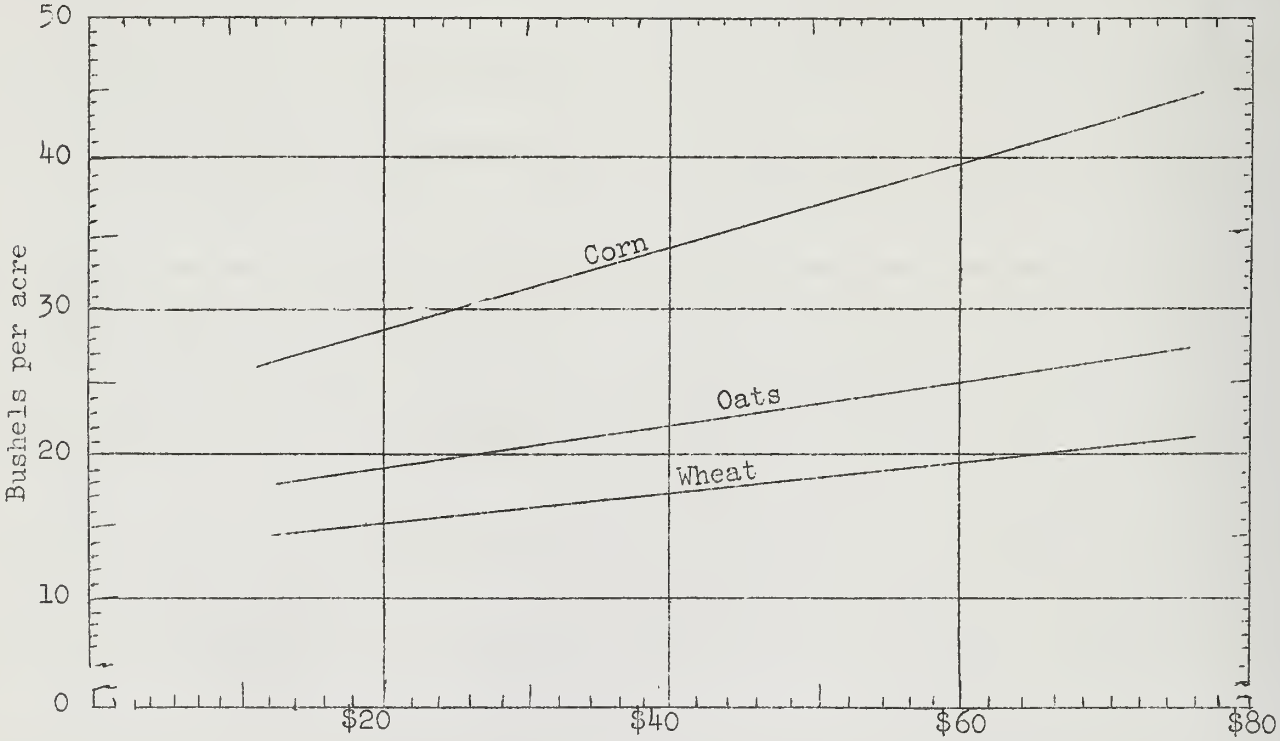
The numbers above the double line of the page are the averages for the farms similar in organization to your farm. By drawing a line across each column at the place which measures the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

Rate earned on investment, percent	Acres in farm	Gross earnings per acre	Factors that affect the gross earnings									Gross expense per acre	Factors that affect expenses		
				Crop yields											
			Percent of tillable land in legume hay and pasture	Corn, bu.	Oats, bu.	Wheat, bu.	Feed fed per acre to prod. l.s.	Returns per $100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked		Horse and machinery cost per crop acre	Labor cost per crop acre	Buildings cost per acre
30.8	438								6.80	242					
27.8	398								6.40	232					
24.8	358								6.00	222					
21.8	318								5.60	212					
18.8	278								5.20	202					
15.8	238								4.80	192					
12.8	198								4.40	182					
9.8	158								4.00	172					
6.8	118								3.60	162					
3.8	78								3.20	152					
--	--								2.80	142					
* 3%	40	$3	3%	4 bu	4 bu	2 bu	$2	$15	$.40	$10	$10	$2	$1	$1	$.30

*Each space between lines represents the value indicated at bottom of each column.

TABLE 4.--USE OF TILLABLE LAND AND OTHER FACTORS RELATED TO THE VALUE OF IMPROVED LAND
Accounting Farms in Farming-Type Area 8, 1943

Item	Value of improved land			
	Less than $33	$33 to $47	$48 to $62	$63 or more
Average value of improved land- - -	$ 27	$ 40	$ 55	$ 73
Number of farms - - - - - - - - - - -	18	27	15	17
Acres per farm- - - - - - - - - - - -	223	236	247	247
Percent of land area tillable - - -	85.8	84.3	85.3	84.7
Percent of tillable land in:				
Corn- - - - - - - - - - - - - - - -	22.6	26.5	36.0	33.0
Oats- - - - - - - - - - - - - - - -	7.4	6.4	3.8	3.8
Wheat - - - - - - - - - - - - - - -	9.6	13.6	9.7	11.0
Soybeans- - - - - - - - - - - - - -	4.7	9.5	14.9	10.7
Other crops - - - - - - - - - - - -	15.4	11.0	11.1	14.0
Legume hay and pasture- - - - - -	20.2	20.8	15.7	18.5
Nonlegume hay and pasture - - - -	20.1	12.2	8.8	9.0
Gross earnings per acre - - - - - -	$21.95	$25.13	$28.44	$33.89
Gross expenses per acre - - - - - -	13.90	13.34	13.92	12.81
Net earnings per acre - - - - - - -	$ 8.05	$11.79	$14.52	$21.08
Land tax per acre - - - - - - - - -	$ .50	$ .69	$ .84	$ 1.04



Per Acre Value of Improved Land
Fig. 1.--Average yields of corn, oats, and wheat with varying values of improved land.

Unpaid family labor. Although the amount of operator's and family labor per farm increased only 1.2 months, the total valuation of unpaid labor was much higher for 1943 than for any other year in the past four. This increase resulted from the fact that the physical labor of the operator and other members of the family was valued at $70 to $80 per month in 1943, at $55 per month in 1942, at $45 per month in 1941, and at $40 per month in 1940.

Variation in farm earnings. A wide variation was found in earnings on the farms in Area 8. For example, 18 farms earned less than nine percent on their investments, with an average of 5.0 percent; and 18 farms earned 21 percent or more, with an average of 26.6 percent. After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had $858 for labor and management earnings contrasted with $5,914 for the latter group. The variation in earnings for all the records in the area was as follows:

Rate earned on investment (percent)	Number of farms	Average rate earned (percent)	Acres per farm	Capital invested per farm	Gross earnings per farm	Net earnings per farm	Labor and management earnings
Less than 9.00	18	5.0	244	18 889	4 880	940	858
9.00 to 14.99	22	12.1	227	20 226	5 637	2 447	2 205
15.00 to 20.99	19	17.7	231	19 821	6 582	3 512	3 304
21.00 or more	18	26.6	251	23 450	9 857	6 234	5 914

Explanation of Tables

Variable standards are used in analyzing the farm business (Table 3). They make allowances for the following facts: (1) that the quality of land affects the cropping system and the crop yields; (2) that the kind of livestock influences the amount of feed fed and the returns per $100 worth of feed fed; (3) that the size and intensity of the farm business affects practically all the cost items; and (4) that price relationships and quantities of the products produced affect the relative profitableness of various types of farming for any particular year.

(Note--Labor Units are explained on page 11.)

Land Use and Crop Yields

The percent of tillable land in grain crops increased as the value per acre for improved land increased (Table 4). Likewise earnings per acre, and land tax per acre increased as the value of improved land increased. On the other hand, the percent of tillable land in legume and nonlegume hay and pasture decreased as the value of the land increased.

Yields per acre for corn, oats, and wheat increased as the value of improved land increased (Fig. 1). By using Table 4 and Figure 1, the account keeper may find out whether his acreage in various crops, his crop yields, and his net earnings per acre were high or low for 1943 in comparison with the average of other farms in his area having about the same value for improved land.

TABLE 5 --SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 8, 1943

	Source of Income			
			General farms	
Item	Grain 35%+	Hogs 40%+	L.S. 60%-	L.S. 60%+
Number of farms - - - - - - - -	9	29	10	29
Percent of income from prod. l.s.	40.7	86.7	54.0	81.8
Percent of income from crops- -	48.9	.9	28.1	4.7
Investments				
Total per farm- - - - - - - -	$28 736	$22 829	$18 928	$16 336
Total per acre- - - - - - - -	109	85	88	79
Land per acre - - - - - - - -	64	44	47	40
Land improvements per acre- -	2.29	2.57	1.90	2.30
Buildings per acre- - - - - -	8.52	8.82	11.26	7.69
Machinery per acre- - - - - -	12.07	7.03	8.27	7.56
Earnings				
Per farm				
Gross earnings- - - - - - -	$ 8 881	$ 7 166	$ 5 780	$ 4 833
Gross expenses- - - - - - -	3 703	3 259	2 804	2 763
Net earnings- - - - - - - -	$ 5 178	$ 3 907	$ 2 976	$ 2 070
Net earnings per acre - - - -	19.73	14.55	13.86	10.02
Rate earned on investment - -	18.0%	17.1%	15.7%	12.7%
Labor and management earnings	$ 4 469	$ 3 580	$ 2 854	$ 2 090
Size and Intensity				
Acres per farm- - - - - - - -	262	268	215	207
Percent of land area tillable	91.0	81.9	84.0	86.9
Percent tillable land in grain	70.3	59.3	60.5	51.0
Percent in hay and pasture- -	27.2	29.2	29.4	36.9
Feed fed per acre to prod. l.s.1/	$ 11.20	$ 16.73	$ 11.07	$ 12.96
Months of labor per 100 crop A.	11.5	13.7	14.8	17.3
Total months of labor - - - -	22.8	20.8	19.3	20.8
Crop Yields per Acre				
Corn, bu. - - - - - - - - - -	44.6	37.4	36.7	33.8
Wheat, bu.- - - - - - - - - -	25.0	18.7	15.2	16.3
Livestock Returns				
Per $100 feed fed1/ - - - - -	$ 135	$ 145	$ 143	$ 160
Hog returns per litter- - - -	177	200	158	168
Dairy returns per cow1/ - - -	98	95	113	112
Labors Factors				
Labor cost per crop acre- - -	$ 8.12	$ 10.24	$ 11.15	$ 12.36
Labor units on crops- - - - -	24.2	17.1	16.0	14.2
Labor units on livestock- - -	10.6	13.2	10.3	13.5
Total labor units - - - - -	34.8	30.3	26.3	27.7
Labor units per worker- - - -	18.3	18.0	16.4	16.0
Other Expense Factors				
Horse and machinery cost per crop acre - - - - - - -	$ 6.32	$ 6.63	$ 5.79	$ 6.80
Land improvements cost per acre	1.43	1.20	.96	1.03
Buildings cost per acre - - -	.74	.65	.80	.69
Land tax per acre - - - - - -	1.02	.74	.78	.67

1/ Used in Table 3.

Source of Income

The grouping of accounting farms according to source of income gives each farmer an opportunity to compare his farm with the average of other farms having similar sources of income. It also gives him an opportunity to study investments, land use, crop yields, labor requirements, horse and machinery requirements, and other factors that are associated with various types of farming.

Interpretation of table. Each farmer should, however, use caution in interpreting the data in Table 5. For example, the fact that grain farms earned 18.0 percent on the investment for 1943 while general farms with the most livestock earned 12.7 percent for the same period, does not mean that such a relationship will prevail over a long period of years. The relative profitableness of enterprises is due largely to conditions affecting price and production.

In comparing the returns on the various groups of farms per $100 worth of feed fed, one should consider the fact that there is a wide variation in the needed returns per $100 worth of feed fed to pay for feed (including pasture), labor, equipment, buildings, and other costs. According to 5-year averages of complete cost studies (1933-1937), the necessary returns were: poultry, $195; dairy cattle, $157; hogs, $127 and feeder cattle, $117.

Apparently the grain farms were located on the highest quality land and the general farms with the most livestock were located on the lowest quality land. This is indicated in the analysis by the following variations: land value per acre, $64 to $40; percent of tillable land in grain, 70.3 to 51.0; corn yield per acre, 44.6 bu. to 33.8 bu.; and land tax per acre $1.02 to $.67, respectively.

Labor. Although the labor cost per acre varied from $8.12 on the grain farms to $12.36 on the general farms with the most livestock, the variation in labor units per worker was not particularly significant. Labor units on crops, however, varied from 24.2 on the grain farms to 14.2 on the general farms with the most livestock; whereas, labor units on livestock varied from 10.6 to 13.5 for the same two groups of farms.

Other expense factors. The horse and machinery cost per crop acre was lowest on the general farms with the least livestock, but the variation between the other groups was not significant. Land improvements cost was highest on the grain farms, where it averaged $1.43 per acre and lowest on the general farms with the least livestock, where it averaged $.96 per acre.

Size of Farm

When average farm earnings are above the capitalization rate (5 percent is the usual rate used), large farms show higher labor and management earnings than small farms. Conversely, when average farm earnings are below the capitalization rate, large farms show a greater loss. In 1943, with farm earnings averaging 15.8 percent, the labor and management earnings on the 18 largest farms averaged $4,959 contrasted with $2,064 on the 18 smallest farms.

TABLE 6 --SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 8, 1943

Item	Total Acres in Farm			
	Less than 141	141 to 220	221 to 300	301 or more
Number of farms	18	24	17	18
Acres per farm	114	181	253	421
Investments				
Total per farm	$11 522	$15 159	$20 142	$37 225
Total per acre	101	84	80	88
Land improvements per acre	3.19	2.96	2.41	1.78
Buildings per acre[1]	12.46	7.90	8.01	8.53
Machinery per acre	8.83	8.58	8.38	7.23
Earnings				
Per farm				
Gross earnings	$ 3 913	$ 5 255	$ 5 916	$10 583
Gross expenses	2 098	2 576	3 307	4 562
Net earnings	$ 1 815	$ 2 679	$ 2 609	$ 6 021
Net earnings per acre	15.92	14.78	10.31	14.29
Rate earned on investment	15.8%	17.7%	13.0%	16.2%
Labor and management earnings	$ 2 064	$ 2 757	$ 2 389	$ 4 959
Size and Intensity				
Percent of land area tillable	83.0	88.9	84.1	83.6
Percent of tillable land in grain	59.5	57.9	59.8	57.0
Percent in hay and pasture	35.7	36.2	32.7	26.9
Feed fed per acre to prod. l.s.	$ 20.12	$ 14.99	$ 11.50	$ 13.47
Percent of income from prod. l.s.	86.6	78.1	66.4	70.8
Percent of income from crops	--	9.4	18.6	18.5
Months of labor per 100 crop acres	22.5	15.9	14.0	11.9
Total months of labor[1]	15.6	17.9	21.7	29.2
Crop Yields per Acre				
Corn, bu.	39.2	37.4	34.2	38.9
Wheat, bu.	18.9	17.2	18.6	19.7
Livestock Returns				
Per $100 feed fed	$ 159	$ 158	$ 146	$ 138
Hog returns per litter	184	205	182	178
Dairy returns per cow	109	116	94	105
Labor Factors				
Labor cost per crop acre	$ 15.74	$ 11.42	$ 10.38	$ 8.95
Labor units on crops[1]	8.5	13.5	18.7	27.9
Labor units on livestock[1]	10.6	11.2	11.9	17.6
Total labor units[1]	19.1	24.7	30.6	45.5
Labor units per worker[1]	14.7	16.6	16.9	19.1
Other Expense Factors				
Horse and machinery cost per crop acre	$ 8.43	$ 6.77	$ 7.19	$ 5.47
Land improvements cost per acre	1.30	1.42	1.31	.85
Buildings cost per acre[1]	.93	.70	.53	.71
Land tax per acre	.76	.73	.74	.78

[1] Used in Table 3.

Intensity. The smaller farms were operated more intensively than were the larger ones. This variation is indicated by the higher investments per acre, by the larger amount of feed fed per acre to productive livestock, and by the higher percent of income from productive livestock.

Labor. As the size of the farms increased from less than 141 acres to 301 acres or more the labor cost per crop acre decreased from $15.74 to $8.95. On the other hand, labor units on crops increased from 8.5 to 27.9; labor units on livestock increased from 10.6 to 17.6; total labor units increased from 19.1 to 45.5; and labor units per worker increased from 14.7 to 19.1.

Other expense items. Expense per crop acre from the smallest to the largest size group decreased for horses and machinery from $8.43 to $5.47; and for land improvements from $1.30 to $.85.

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crop yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Labor and Horse and Machinery Expenses

Labor and horse and machinery expenses per crop acre increase as the amount of livestock per acre increases, but decrease, for the most part, as the size of the farm increases. Therefore the efficiency of a farm in using labor and machinery should be determined by comparing the expenses on the individual farm with those of other farms of the same size having similar amounts of livestock per acre. The average labor cost per crop acre and the average horse and machinery cost per crop acre are shown for farms grouped according to acres per farm and value of feed fed per acre to productive livestock (Table 7).

TABLE 7.--LABOR COST PER CROP ACRE AND HORSE AND MACHINERY COST PER CROP ACRE FOR VARIATIONS IN SIZE OF FARM AND AMOUNT OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK

Accounting Farms in Farming-Type Area 8, 1943

Acres per farm	Feed fed per acre			Feed fed per acre		
	Less than $12.00	$12.00 to $17.99	$18.00 or more	Less than $12.00	$12.00 to $17.99	$18.00 or more
	(labor cost per crop acre)			(horse and machinery cost per crop acre)		
Less than 141	$12.55	$15.61	$16.37	$7.59	$8.43	$9.09
141 to 220	11.17	12.11	13.27	6.34	6.70	7.88
221 to 300	10.21	10.60	11.80	6.61	7.00	8.38
301 or more	7.73	8.91	9.60	4.94	5.93	6.20

Supplementary Labor Analysis

Labor units are used in this report to supplement the foregoing measures of labor efficiency.

A labor unit is essentially the same as a war unit. It is the approximate amount of time under average conditions that is required to take care of a dairy cow for one year or to do an equivalent amount of work with other livestock or crops. For example, the labor unit assumes that one dairy cow requires about as much work as 5.5 acres of corn, 8.3 acres of soybeans for grain, 14.3 acres of small grain or hay, 10 beef cows, 20 feeder cattle, 3 litters of pigs, 33 sheep, 160 feeder lambs, or 77 hens.

Obviously, no other computation of work units for the individual farmer will agree with those written in this report unless the acres and classification of crops as well as the numbers and kinds of livestock are the same as those recorded in the farm account book.

Labor Saving References

Labor simplification is suggested by the picture on the front cover of this report. For additional suggestions, ideas, and plans see your farm adviser or write directly to the University of Illinois, for the following publications:

Department of Agricultural Economics

"Making Your Labor Go Further," mimeograph AE-2182
"Feeding Cattle With Less Labor," AE-2169
"Making the Most of Available Labor," AE-2001

Emergency Farm Labor Office

"Making Food With Less Labor," printed leaflet

Department of Agricultural Engineering

"Hog Equipment," Circular 554
In addition, the Department of Agricultural Engineering supplies lists from which plans for labor saving devices, equipment, and structures may be selected.

Producing for War Needs

The account keeper should use the standards in this report to compare his own production with that of other account keepers. He should then adopt on his farm the kind of farm plan and the management practices that will make the best possible use of land, buildings, livestock, labor, machinery, and other resources for the duration of the war. Thus he will have more products to put on the nation's markets and so will be making the greatest possible contribution to the war effort.

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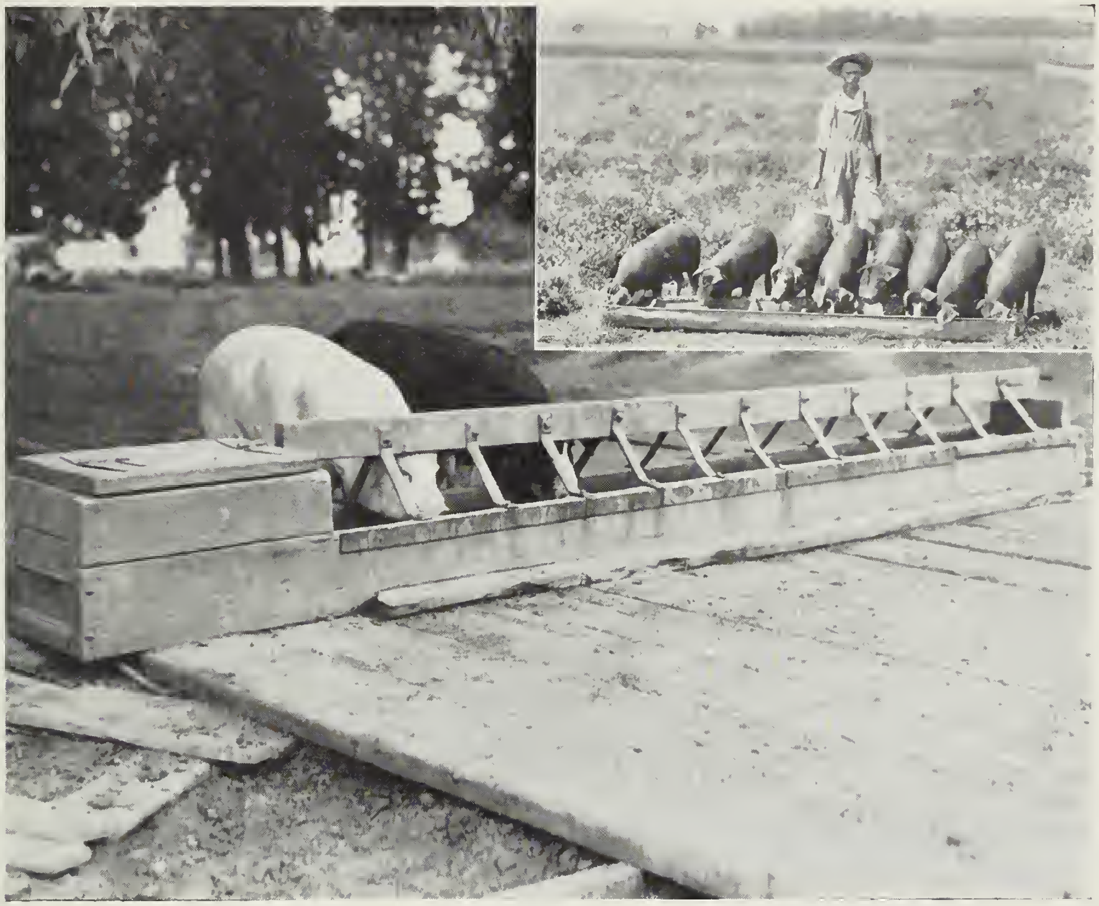

Labor-saving methods and devices lead to increased wartime production. This homemade waterer, which may be attached to a pressure system or to a tank wagon, is float controlled, requires little attention and provides fresh water at all times. Moreover, it is mudhole proof. Upper right — the hard way.

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Annual Farm Business Report

ON TWENTY-TWO FARMS IN FARMING-TYPE AREA 9, 1943

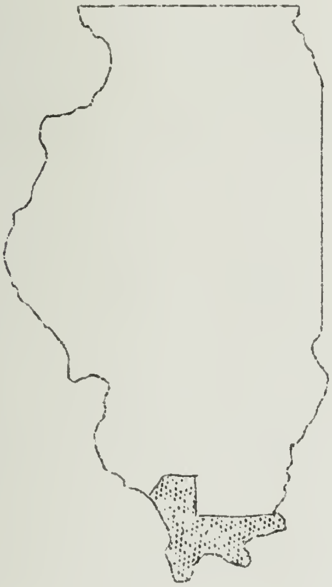
By J. B. Cunningham, J. E. Wills, and J. A. Snyder[1]

Production changes. Accounting farmers in Farming-Type Area 9 attempted to step-up production in 1943 over that of 1942 by increasing acres operated, grain acreage, grain production, and numbers of pigs and hens.

Table 1.--Production and Production Changes, All Account Keeping Farms in Area 9

Item (average per farm)	1942	1943	Change
Acres	214	238	24 acres increase
Acres of grain crops	75	81	6 acres increase
Number of dairy cows	8	8	None
Number of pigs weaned	46	51	5 pigs increase
Number of hens	140	177	37 hens increase
Total months of labor	21	23	2 months increase
Value of machinery (beginning of year)	$1 263	$1 470	$207 increase
Tons of grain produced	48	54	6 tons increase
Value of production of livestock and livestock products[a]	$3 139	$3 114	$25 decrease

[a] 1943 adjusted to 1942 price levels.



▨ Farming-Type Area 9
Fruit and Vegetable

Although more labor was used in 1943 than in 1942, most of the increase was in operator's and family labor which averaged 16 months in 1943 and 14.1 months in 1942.

Increased machinery and equipment investments at the beginning of 1943 reflect 1942 purchases of movable hog houses, brooder houses, and other livestock equipment rather than large purchases of tillage tools.

There was an increase of 8 percent in grain acreage, and grain produced per farm increased 13 percent or from 48 tons in 1942 to 54 tons in 1943. This increase was due to higher yields per acre for wheat, oats, barley, and soybeans. Livestock production as measured by receipts and net increases for livestock and livestock products which were valued at the same price for 1943 as for 1942, showed a slight decrease.

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[1] The project was conducted in cooperation with the county farm bureaus and was supervised by the following farm advisers: J. G. McCall, Jackson-Perry; J. R. Strubinger, Massac; G. C. Smith, Pope-Hardin; and T. L. Davis (L. B. Broom since March, 1944), Pulaski-Alexander.

TABLE 2.--INVENTORY CHANGES, CASH RECEIPTS, AND CASH EXPENSES
Accounting Farms in Farming-Type Area 9, 1940-1943

Item	Your farm	Average of all farms in area			
		1943	1942	1941	1940
Inventory Changes					
Land improvements - - - - - - - -	$	$ 9	$ 13	$) 11	$ 132
Farm buildings- - - - - - - - - -		44	41	)	
Horses- - - - - - - - - - - - - -		5	-29	-62	-16
Productive livestock- - - - - -		99	477	356	141
Feed, grain, and seeds- - - - -		238	314	274	181
Machinery and equipment - - - -		-90	-65	36	35
Automobile (farm share) - - - -		-33	-8	-32	41
Total - - - - - - - - - - - - - -	$	$ 272	$ 743	$ 583	$ 514
Cash Receipts					
Land improvements - - - - - - - -	$	$ 2	$ 18	$) 8	$ 31
Farm buildings- - - - - - - - - -		12	9	)	
Horses- - - - - - - - - - - - - -		109	53	75	45
Productive livestock: Cattle- -		526	486	623	396
Dairy sales		987	773	559	364
Hogs- - -		1 297	1 203	747	331
Sheep - -		51	27	44	38
Poultry -		198	115	76	60
Egg sales		616	407	186	119
Total productive livestock- - -	( )	(3 675)	(3 011)	(2 235)	(1 308)
Feed, grain, and seeds- - - - -		987	790	734	587
Machinery and equipment - - - -		171	137	206	94
Automobile (farm share) - - - -		4	31	9	40
AAA receipts- - - - - - - - - -		431	202	137	243
Labor off farm- - - - - - - - -		20	25	29	14
Miscellaneous - - - - - - - - - -		2	1	20	2
Total - - - - - - - - - - - - - -	$	$ 5 413	$ 4 277	$ 3 453	$ 2 364
Cash Expenses					
Land improvements - - - - - - - -	$	$ 186	$ 159	$) 258	$ 213
Farm buildings- - - - - - - - - -		216	175	)	
Horses- - - - - - - - - - - - - -		79	35	21	28
Productive livestock: Cattle- -		85	200	246	135
Hogs- - -		51	112	60	34
Sheep - -		--	5	1	9
Poultry -		59	32	24	15
Total productive livestock- - -	( )	(195)	(349)	(331)	(193)
Feed and grain purchases- - - -		676	566	417	184
Crop and sealing expense- - - -		177	162	156	96
Machinery and equipment - - - -		701	561	678	448
Automobile (farm share) - - - -		105	147	76	157
Livestock expense - - - - - - - -		59	50	36	19
Hired labor - - - - - - - - - - -		447	296	313	249
Taxes - - - - - - - - - - - - - -		187	167	159	147
Miscellaneous - - - - - - - - - -		24	24	18	18
Total - - - - - - - - - - - - - -	$	$ 3 052	$ 2 691	$ 2 463	$ 1 752
Summary					
Total inventory change- - - - -	$	$ 272	$ 743	$ 583	$ 514
Cash balance- - - - - - - - - - -		2 361	1 586	990	612
Farm products used in household		404	345	278	220
Receipts less expenses- - - - -	$	$ 3 037	$ 2 674	$ 1 851	$ 1 346
Total unpaid labor- - - - - - -		1 123	778	663	530
Net earnings per farm - - - - - -	$	$ 1 914	$ 1 896	$ 1 188	$ 816
Net earnings per acre - - - - - -	$	$ 8.02	$ 8.85	$ 5.13	$ 3.49

TABLE 3.--INVESTMENTS AND EARNINGS
Accounting Farms in Farming-Type Area 9, 1940-1943

Item	Your farm	Average of all farms in area			
		1943	1942	1941	1940
Number of farms - - - - - - - - - -		22	28	34	55
Acres per farm- - - - - - - - - - -		238	214	232	234
Capital Investments					
Land- - - - - - - - - - - - - - - - -	$	$ 6 742	$ 5 777	$ 6 049	$ 5 907
Land improvements - - - - - - - -		1 008	629	2 299	2 323
Farm buildings- - - - - - - - - - -		1 816	1 522		
Horses- - - - - - - - - - - - - - - -		301	300	396	375
Productive livestock: Cattle- - -		1 063	852	878	786
Hogs- - - -		512	314	199	172
Sheep - - -		60	39	40	35
Poultry - -		181	127	97	86
Total productive livestock- - - -	( )	(1 816)	(1 332)	(1 214)	(1 079)
Feed, grain, and seeds- - - - - -		1 630	1 223	1 068	843
Machinery and equipment - - - - -		1 470	1 263	1 154	1 061
Automobile (farm share) - - - - -		204	207	204	145
Total - - - - - - - - - - - - - -	$	$14 987	$12 253	$12 384	$11 733
Receipts less expenses- - - - - -	$	$ 3 037	$ 2 674	$ 1 851	$ 1 346
Family labor- - - - - - - - - - - -		366	208	214	156
Returns for labor, capital, mgt.	$	$ 2 671	$ 2 466	$ 1 637	$ 1 190
Operator's labor- - - - - - - - -		757	570	449	374
Net earnings per farm - - - - - -	$	$ 1 914	$ 1 896	$ 1 188	$ 816
Rate Earned on Investment - - - - -	%	12.8%	15.5%	9.6%	7.0%
Interest on investment- - - - - -	$	$ 750	$ 613	$ 619	$ 587
Labor and Management Earnings - - -		1 921	1 853	1 018	603

Net earnings. The net earnings per farm on an inventory basis were only slightly higher in 1943 than in 1942; the average was $1,914 in 1943 compared with $1,896 in 1942. The figure representing net earnings per farm is the sum remaining as compensation for the use of the capital invested in the business and for the managerial ability of the operator. It is calculated by adding to the cash balance the value of farm products used in the household and the inventory increases and by subtracting from the resulting total the value of unpaid labor. Therefore this figure indicates the earning power of the business and determines the real value of the farm and its equipment. The average net earnings per acre were $8.02 in 1943, $8.85 in 1942, $5.13 in 1941, and $3.49 in 1940.

Inventory changes. The year 1943 was the seventh consecutive year in which inventories increased. The largest increase for the past four years was $743 in 1942 and the smallest was $272 in 1943 (Table 2). The largest value increases in 1943 were for feed, grain, and seeds, even though quantities decreased. The average amounts of grain on hand on accounting farms in Area 9 at the two inventory periods were:

Crop	Beginning of year 1943 (bushels)	End of year 1943 (bushels)
Corn	931	862
Oats	150	186
Wheat	107	78
Soybeans	120	88

TABLE 4.--FACTORS HELPING TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 9, 1943

Item	Your farm	Standards for your farm	Average of 22 farms
Rate earned on investment	______%	12.8%	12.8%
Acres in farm	______	238	238
Acres in crops	______	113	113
Gross earnings per acre	$______	$______ a/	$ 20.31
Gross expenses per acre			12.29
Investments			
Value of land per acre	$______	$ 28	$ 28
Value of improved land per acre	______	______ a/	32
Value of buildings per acre	______	______ e/	8
Total investment per acre		63	63
Land Use			
Percent of land area tillable	______	______ a/	75.7
Percent of tillable land in:			
Corn	______	______	17.2
Oats	______	______	6.9
Wheat	______	______	11.0
Soybeans	______	______	6.8
Other crops	______	______	22.7
Legume hay and pasture	______	______	25.6
Nonlegume hay and pasture			9.8
Crop Yields			
Corn	______	______ b/	36.7
Oats	______	______	24.6
Wheat			17.6
Livestock Factors			
Value of feed fed to prod. l.s.	$______	$2 264	$2 264
Feed fed per acre to prod. l.s.	______	______ c/	9.50
Returns per $100 worth of feed fed	______	______ c/	172
Poultry returns per hen	______	4.93	4.93
Number of litters farrowed	______	8	8
Number of pigs weaned per litter	______	6.4	6.4
Returns per litter farrowed	$______	$ 178	$ 178
Average number of cows milked	______	8	8
Dairy returns per cow milked	$	$ 134	$ 134
Labor Factors			
Labor cost per crop acre	$______	$______ d/	$ 13.76
Labor units on crops	______	______ e/	13.5
Labor units on livestock		______	13.8
Total labor units	______	______	27.3
Total months of labor	______	______	23.4
Labor units per worker	______	______	14.0
Other Expense Factors			
Horse and machinery cost per crop acre	$______	$______ d/	$ 8.11
Land improvements cost per acre	______	.73	.73
Buildings cost per acre	______	______ e/	.67
Land tax per acre		a/	.65

a/ Table 4, value of improved land.
b/ Fig. 1, value of improved land.
c/ Table 7, source of income.
d/ Table 9, size of farm and value of feed fed per acre.
e/ Table 8, size of farm.

CHART FOR STUDYING THE EFFICIENCY OF VARIOUS PARTS OF YOUR BUSINESS

Accounting Farms in Farming-Type Area 9, 1943

The numbers above the double line of the page are the averages for the farms similar in organization to your farm. By drawing a line across each column at the place which measures the efficiency of your farm in that factor, you can compare your efficiency with that of other farmers in your locality.

			Factors that affect the gross earnings										Factors that affect expenses		
				Crop yields											
Rate earned on investment, percent	Acres in farm	Gross earnings per acre	Percent of tillable land in legume hay and pasture	Corn, bu.	Oats, bu.	Wheat, bu.	Feed fed per acre to prod. l.s.	Returns per $100 feed fed	Poultry returns per hen	Hog returns per litter farrowed	Dairy returns per cow milked	Gross expense per acre	Horse and machinery cost per crop acre	Labor cost per crop acre	Buildings cost per acre
27.8	388								6.43	228					
24.8	358								6.13	218					
21.8	328								5.83	208					
18.8	298								5.53	198					
15.8	268								5.23	188					
12.8	238								4.93	178					
9.8	208								4.63	168					
6.8	178								4.33	158					
3.8	148								4.03	148					
.8	118								3.73	138					
--	88								3.43	128					
* 3%	30	$2	2%	3	3	2	$2	$15	$.30	$10	$10	$1	$1	$2	$.20

*Each space between lines represents the value indicated at bottom of each column.

TABLE 5.--USE OF TILLABLE LAND AND OTHER FACTORS RELATED TO THE VALUE OF IMPROVED LAND
Accounting Farms in Farming-Type Area 9, 1943

Item	Value of improved land Less than $28	$28 to $37	$38 or more
Average value of improved land	$ 25	$ 32	$ 45
Number of farms	7	11	4
Acres per farm	220	254	228
Percent of land area tillable	81.7	71.0	80.2
Percent of tillable land in:			
Corn	15.5	19.4	14.2
Oats	6.4	8.3	4.2
Wheat	8.8	12.2	11.6
Soybeans	5.5	7.1	7.9
Other crops	24.8	19.0	28.5
Legume hay and pasture	26.2	25.1	24.0
Nonlegume hay and pasture	12.8	8.9	9.6
Gross earnings per acre	$ 20.07	$ 21.39	$ 20.45
Gross expenses per acre	13.54	12.62	12.20
Net earnings per acre	$ 6.53	$ 8.77	$ 8.25
Land tax per acre	$ .55	$ .67	$ .73

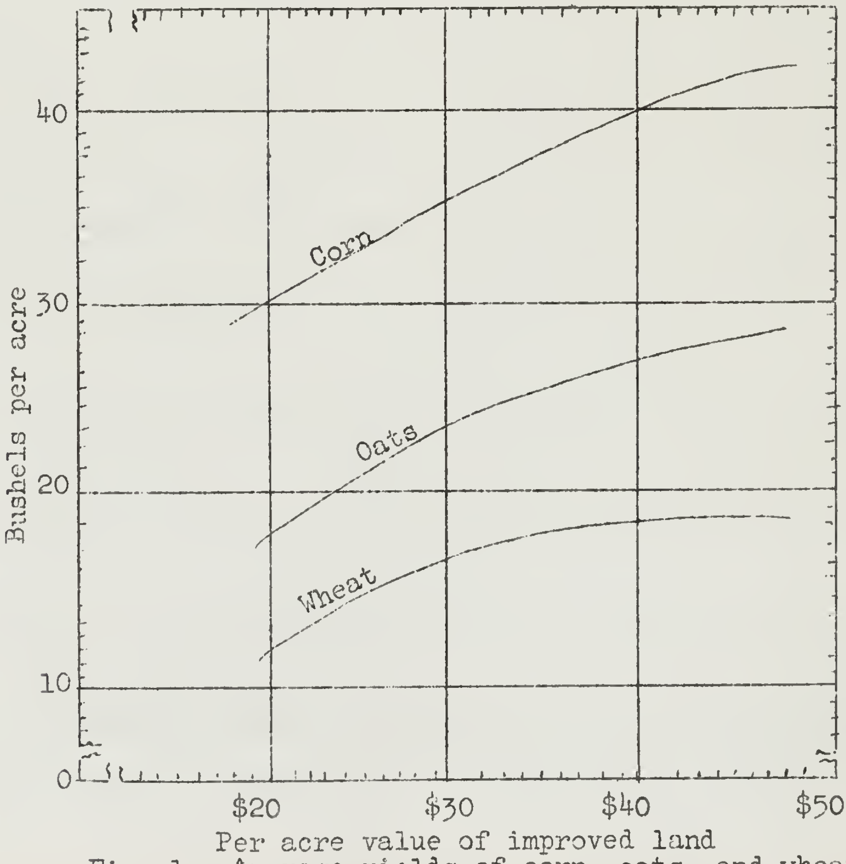


Fig. 1.--Average yields of corn, oats, and wheat with varying values of improved land.

Unpaid family labor. The total valuation of unpaid labor was higher for 1943 than for any other year in the past four. This increase resulted principally from the fact that the physical labor of the operator and other members of the family was valued at prevailing farm wages which were approximately $70 per month in 1943, $55 per month in 1942, $45 per month in 1941, and $40 per month in 1940.

Variations in farm earnings. A wide variation was found in earnings on the farms in Area 9. For example, 8 farms earned less than eight percent on their investment; but 8 farms earned 18 percent or more. After deducting all farm expenses and a charge of 5 percent for the use of the capital invested in the business, the former group of operators had $338 for their labor and management earnings contrasted with $3,581 for the latter group. The variation in earnings for all the records in the area was as follows:

Table 6.--Variation in 1943 Earnings, 22 Accounting Farms in Area 9

Rate earned on investment	Number of farms	Average rate earned	Acres per farm	Capital invested per farm	Gross earnings per farm	Net earnings per farm	Labor and management earnings
(percent)		(percent)					
Less than 8.00	8	2.1	290	15 811	4 237	337	338
8.00 to 17.99	6	13.1	205	13 917	4 541	1 830	1 817
18.00 or more	8	23.7	212	14 966	6 517	3 551	3 581

Explanation of Tables

Variable standards are used in analyzing the farm business (Table 4). They make allowances for the following facts: (1) that the quality of land affects the cropping system and the crop yields; (2) that the kind of livestock influences the amount of feed fed and the returns per $100 worth of feed fed; (3) that the size and intensity of the farm business affects practically all the cost items; and (4) that price relationships and quantities of the products produced affect the relative profitableness of various types of farming for any particular year.

The terms used in the tables are the same as the terms used in the Illinois farm account book. For example, "improved land" is classified on page 1 of the farm account book. It means crop land, tillable pasture, and land occupied by farmstead, roads, and lanes. Likewise, "crop acres" are listed on page 20 of the farm account book. They include all the tillable land on which a large amount of work has been done in preparing a seedbed or in cultivating or harvesting a crop.

(Note: A labor unit is explained on page 12.)

Land Use and Crop Yields

The percent of tillable land in grain crops tended to increase as the value per acre for improved land increased (Table 5). Likewise, the earnings per acre and the land tax per acre tended to increase as the value of improved land increased. On the other hand, the percent of tillable land in legume and nonlegume hay and pasture tended to decrease as the value of the land increased.

Yields per acre for corn, oats, and wheat increased as the land value increased (Fig. 1). By using Table 5 and Figure 1, the account keeper may find out whether his acreage in various crops, crop yields, and earnings per acre were high or low in comparison with the average of other farms in his area having about the same value of improved land.

TABLE 7.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 9, 1943

Item	Source of Income	
	General farms L.S. 70%-	General farms L.S. 70% +
Number of farms	10	12
Percent of income for productive livestock	58.3	82.9
Percent of income from crops	23.5	--
Investments		
Total per farm	$16 336	$13 864
Total per acre	74	55
Land per acre	33	25
Land improvements per acre	6.79	2.36
Buildings per acre	8.31	7.11
Machinery per acre	8.44	6.00
Earnings		
Per farm		
Gross earnings	$ 5 446	$ 4 723
Gross expenses	3 078	3 189
Net earnings	$ 2 368	$ 1 534
Net earnings per acre	10.71	6.06
Rate earned on investment	14.5%	11.1%
Labor and management earnings	$ 2 307	$ 1 599
Size and Intensity		
Acres per farm	221	253
Percent of land area tillable	81.5	71.5
Percent of tillable land in grain	54.5	39.4
Percent in hay and pasture	29.3	40.6
Feed fed per acre to productive livestock	$ 9.22	$ 9.70
Months of labor per 100 crop acres	18.8	22.8
Total months of labor	24.4	22.5
Crop Yields per Acre		
Corn, bu.	39.7	33.8
Wheat, bu.	19.1	15.6
Livestock Returns		
Per $100 feed fed	$ 173	$ 172
Hog returns per litter	178	180
Dairy returns per cow	136	139
Labor Factors		
Labor cost per crop acre	$ 12.69	$ 14.89
Labor units on crops	16.3	11.2
Labor units on livestock	12.1	15.3
Total labor units	28.4	26.5
Labor units per worker	14.0	14.1
Other Expense Factors		
Horse and machinery cost per crop acre	$ 7.53	$ 8.77
Land improvements cost per acre	.70	.76
Buildings cost per acre	.64	.69
Land tax per acre	.81	.53

Source of Income

The grouping of accounting farms according to source of income gives each farmer an opportunity to compare his farm with the average of other farms having similar sources of income. It also gives him an opportunity to study investments, land use, crop yields, labor requirements, horse and machinery requirements, and other factors that are associated with various types of farming.

Interpretation of table. Each farmer should, however, use caution in interpreting the data in Table 7. For example, the fact that the less intensive livestock farms earned 14.5 percent on the investment for 1943 and the more intensive livestock farms earned 11.1 percent does not mean that such a relationship will prevail over a long period of years. The relative profitableness of enterprises is due largely to conditions affecting price and production.

In comparing the returns on the various groups of farms per $100 worth of feed fed, one should consider the fact that there is a wide variation in the needed returns per $100 worth of feed fed to pay for feed (including pasture), labor, equipment, buildings, and other costs. According to 5-year averages of complete cost studies (1933-1937), the necessary returns were: poultry, $195; dairy cattle, $157; hogs, $127 and feeder cattle, $117.

Labor. Labor cost per crop acre varied from $12.69 on the less intensive livestock farms to $14.89 on the more intensive livestock farms; whereas, labor units per worker were practically the same on the two groups of farms. Variation between groups was greater in labor units on crops than in labor units on livestock.

Labor input per 100 crop acres was lowest on the less intensive livestock farms, where 18.8 months of labor per 100 acres were used, and highest on the farms with the most livestock, where 22.8 months of labor were used. There was only 1.9 months difference between the two groups in the total months of labor.

Other expense factors. Horse and machinery cost per crop acre averaged $7.53 on the less intensive livestock farms and $8.77 on the more intensive livestock farms; land improvements cost per acre and buildings cost per acre were about the same on the two groups of farms.

Size of Farm

When average farm earnings are above the capitalization rate (5 percent is the usual rate used), large farms usually show higher labor and management earnings than small farms. Conversely, when average farm earnings are below the capitalization rate, large farms show a greater loss. In 1943, with farm earnings averaging 12.8 percent, the labor and management earnings on the 10 largest farms averaged $2,324 contrasted with 1,585 on the 12 smallest farms.

The rate earned on investment did not show any variation due to size of the farm.

TABLE 8.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 9, 1943

Item	Total acres in farm	
	Less than 201	201 or more
Number of farms	12	10
Acres per farm	161	331
Investments		
Total per farm	$10 553	$20 308
Total per acre	66	61
Land improvements per acre	2.37	5.31
Buildings per acre	8.43	7.14
Machinery per acre	8.04	6.44
Earnings		
Per farm		
Gross earnings	$ 3 671	$ 6 250
Gross expenses	2 314	3 670
Net earnings	$ 1 357	$ 2 580
Net earnings per acre	8.43	7.78
Rate earned on investment	12.8%	12.7%
Labor and management earnings	$ 1 585	$ 2 324
Size and Intensity		
Percent of land area tillable	80.9	72.7
Percent of tillable land in grain	50.5	43.5
Percent in hay and pasture	27.1	40.9
Feed fed per acre to productive livestock	$ 10.75	$ 8.76
Percent of income from productive livestock	73.7	74.1
Percent of income from crops	7.3	7.9
Months of labor per 100 crop acres	21.1	20.4
Crop Yields per Acre		
Corn, bu.	32.3	40.3
Wheat, bu.	17.7	17.6
Livestock Returns		
Per $100 feed fed	172	173
Hog returns per litter	182	177
Dairy returns per cow	123	149
Labor Factors		
Labor cost per crop acre	$ 14.58	$ 13.16
Labor units on crops	9.2	18.6
Labor units on livestock	10.9	17.4
Total labor units	20.1	36.0
Labor units per worker	13.6	14.4
Other Expense Factors		
Horse and machinery cost per crop acre	$ 8.92	$ 7.57
Land improvements cost per acre	.70	.76
Buildings cost per acre	.78	.61
Land tax per acre	.75	.59

Intensity. The smaller farms were operated more intensively than were the larger ones. This variation was indicated by the higher proportion of land tillable and the higher percent of tillable land in grain, the larger amount of feed fed per acre to productive livestock, and by more months of labor per 100 crop acres.

Labor. As the size of the farms increased from less than 201 acres to 201 acres or more, the labor cost per crop acre decreased from $14.58 to $13.16. On the other hand, labor units on crops increased from 9.2 to 18.6; labor units on livestock increased from 10.9 to 17.4; total labor units increased from 20.1 to 36.0; and labor units per worker increased from 13.6 to 14.4.

Other expense items. The average cost per crop acre varied for horses and machinery from $8.92 on the small farms to $7.57 on the large farms; for buildings, from $.78 to $.61; and for land taxes, from $.75 to $.59.

The method used to increase the volume of business depended upon the individual farm. Some farm operators apparently increased the volume of their business by improving the quality and increasing the amount of livestock; others, by growing more intensive crops, by increasing crops yields, or by developing special markets; still others, by increasing the acreage operated or by applying combinations of the above methods.

Labor and Horse and Machinery Expenses

Labor and horse and machinery expenses per crop acre increase as the amount of livestock per acre increases, but decrease as the size of farm increases. Therefore the efficiency of a farm in using labor and machinery should be determined by comparing the expenses on the individual farm with those of other farms of the same size having similar amounts of livestock per acre. The average labor cost per crop acre and the average horse and machinery cost per crop acre are shown for farms grouped according to acres per farm and value of feed fed per acre to productive livestock (Table 9).

TABLE 9.--LABOR COST PER CROP ACRE AND HORSE AND MACHINERY COST PER CROP ACRE FOR VARIATION IN SIZE OF FARM AND AMOUNT OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK
Accounting Farms in Farming-Type Area 9, 1943

Acres per farm	Feed fed per acre		Feed fed per acre	
	Less than $9.00	$9.00 or more	Less than $9.00	$9.00 or more
	(labor cost per crop acre)		(horse and machinery cost per crop acre)	
Less than 201	$13.46	$15.12	$ 8.60	$ 8.90
201 or more	12.98	13.43	6.72	8.47

Supplementary Labor Analysis

Labor units are used in this report to supplement the foregoing measures of labor efficiency.

A labor unit is essentially the same as a war unit. It is the approximate amount of time under average conditions that is required to take care of a dairy cow for one year or to do an equivalent amount of work with other livestock or crops. For example, the labor unit assumes that one dairy cow requires about as much work as 5.5 acres of corn, 8.3 acres of soybeans for grain, 14.3 acres of small grain or hay, 10 beef cows, 20 feeder cattle, 3 litters of pigs, 33 sheep, 160 feeder lambs, or 77 hens.

Obviously, no other computation of work units for the individual farmer will agree with those written in this report unless the acres and classification of crops as well as the numbers and kinds of livestock are the same as those recorded in the farm account book.

Labor Saving References

Labor simplification is suggested by the picture on the front cover of this report. For additional suggestions, ideas, and plans see your farm adviser or write directly to the University of Illinois, for the following publications:

Department of Agricultural Economics

"Making Your Labor Go Further," mimeograph AE-2182
"Feeding Cattle With Less Labor," AE-2169
"Making the Most of Available Labor," AE-2001

Emergency Farm Labor Office

"Making Food With Less Labor," printed leaflet

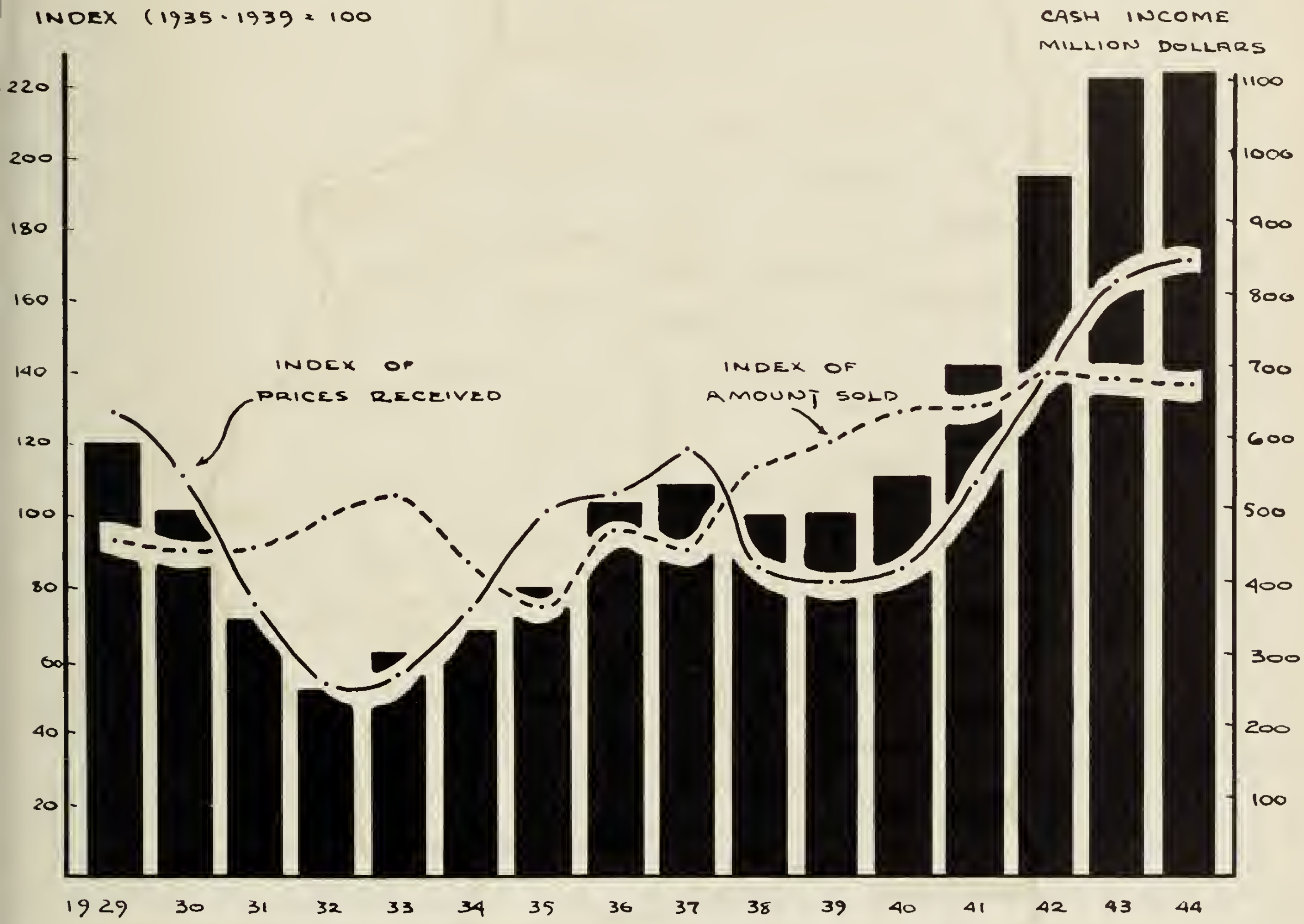
Department of Agricultural Engineering

"Hog Equipment," Circular 554
In addition, the Department of Agricultural Engineering supplies lists from which plans for labor saving devices, equipment, and structures may be selected.

Producing for War Needs

The account keeper should use the standards in this report to compare his own production with that of other account keepers. He should then adopt on his farm the kind of farm plan and the management practices that will make the best possible use of land, buildings, livestock, labor, machinery, and other resources for the duration of the war. Thus he will have more products to put on the nation's markets and so will be making the greatest possible contribution to the war effort.

YOUR FARM BUSINESS REPORT 1944



CASH INCOME, PRICES, AND AMOUNT SOLD, ILLINOIS, 1929-44

Since 1929, cash income to Illinois farmers and prices received for products sold have followed the same general trends, dropping to a depression low in 1932 and rising to a wartime high in 1944. Amount of products sold has varied far less than prices received but has been on a high level since 1938.

FARMING-TYPE AREA ONE
Chicago Dairy Area

NAME____________________________________

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

AE-2312

UNIVERSITY *of* ILLINOIS
COLLEGE *of* AGRICULTURE
AGRICULTURAL EXPERIMENT STATION
URBANA, ILLINOIS

DEPARTMENT *of*
AGRICULTURAL ECONOMICS

June 1, 1945

Dear Cooperator:

This is an analysis of your farm business as shown in the 1944 Farm Account Book which you kept in cooperation with this department. Because we are also short-handed, we have made this report shorter than in past years. We hope you will find it valuable.

The figures for your farm are shown on page 4. Various factors for your farm are compared with figures from similar farms in your area. For example, where size of farm is important in affecting a particular factor, your farm is compared with an average for farms of similar size in your part of the state.

On page 5 various measures of your farm business are shown on a thermometer chart like those used in past years. How favorably your farm compares in different items with other similar farms is shown by the height of the marks on the different columns.

The next three pages are filled with tables and charts showing how the standards used on pages three and four were worked out.

On the inside and outside of the back cover J. B. Cunningham tells how you may use your farm accounts in planning your farm business. As we shift over from wartime farming to peacetime farming within the next two or three years, we will all need to plan carefully. Good records for your business if properly studied will aid you in doing this.

An effort was made to keep this report simple. Additional facts and figures, if needed, may be found in your 1944 farm account book or in the state summary which will appear in an early issue of Illinois Farm Economics.

Over the years we have found farm accounts valuable in helping us to understand what factors make for financial success in farming. Your careful work in keeping the accounts has made this possible.

We thank you for your continued cooperation and hope you will find this report and your account valuable.

Very truly yours,

L. J. NORTON
Acting Head of Department

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Annual Farm Business Report

ONE HUNDRED FORTY-ONE FARMS IN FARMING-TYPE AREA 1, 1944

J. B. Cunningham, Elmer Searls, O. B. Brown[1]

Net farm earnings in Farming-Type Area 1 were lower in 1944 than for any other year since 1940. One hundred forty-one farms from this dairy area averaged $3,068 for operator's labor and management in 1944, whereas such earnings for 1943 averaged $4,429, the wartime high.

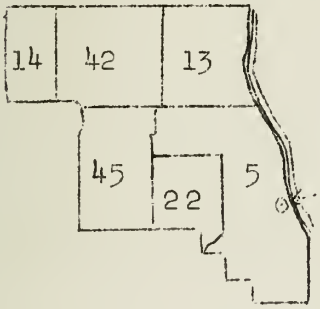
From the tables in this report, each cooperator may determine why his return for 1944 was above or below the average of other farms in the area. Whenever the factor is affected by size, source of income, value of improved land, amount of feed fed, and tenure, the records are sorted into groups and averages are run for each group. This practice permits you to compare your farm with others that are more similar to yours than is the entire group.

The returns per $100 worth of feed fed, amount of feed fed, hog returns per litter, and dairy returns per cow milked are affected by the kind and amount of livestock. If you received over 40 percent of your 1944 income from dairy sales, the standard return per $100 worth of feed fed for your farm is $151, the average of 91 farms with 40 percent or more of their income from dairy sales (Table 3).

If you operated a 150-acre farm and milked an average of 13 cows per 100 acres of land in 1944, your labor cost per crop acre should have been below $24.40 in order to indicate more efficient use of labor than the average of similar farms (Table 5).

Comparisons between farms of different sizes and those with different types of tenure are shown in Tables 4 and 6, respectively.

The number of records from the different counties included in this report are shown in Figure 1:



Farm advisers who assisted with this were: Boone, D. M. Chalcraft; Cook, C. A. Hughes; Du Page, H. S. Wright; Kane, A. C. Johnson; Lake, Ray T. Nicholas; McHenry, W. H. Tammeus since July 15, 1944 (J. H. Brock to June 30, 1944).

FIGURE 1.--NUMBER OF RECORDS BY COUNTIES IN FARMING-TYPE AREA 1.[2]

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[1] O. B. Brown supervised the closing of the accounts and the preparation of the tables used in this report.

[2] One hundred thirteen of the records used were furnished by Farm Bureau Farm Management Service.

TABLE 1.--FACTORS USED TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 1, 1944

Item	Your farm	Average of similar farms
Factors used on efficiency charts, opposite page		
Rate earned on investment	____%	8.8 % a/
Factors that affect the gross income		
Crop yields		
Corn, bu.	____	58 a/
Oats, bu.	____	52
Soybeans, bu.	____	24
Livestock factors		
Returns per $100 worth of feed fed	$____	$____ d/
Hog returns per litter farrowed (No. litters____)	____	____
Dairy returns per cow milked (no. cows____)	____	____
Egg returns per hen (No. hens____)	____	$ 4.04 a/
Factors that affect expenses		
Labor cost per crop acre	$____	$____ e/
Horse and machinery cost per crop acre	____	____
Land improvement cost per acre	____	1.82 a/
Building cost per acre	____	____ c/
Organization of farm		
Acres in farm		203 a/
Percent of tillable land in hay and pasture	____%	____% b/
Feed fed per acre to productive livestock	$____	$____ d/
Other factors not used on efficiency chart		
Cash balance	$____	$ 5734 a/
Total inventory change	____	-384
Net earnings per acre	____	____ b/
Labor and management earnings	____	____ c/
Value of land per acre	____	97 a/
Percent of land area tillable	____%	____% b/
Number of pigs weaned per litter	____	5.9 a/
Total months of labor (months hired____)	____	____ c/
Tenant's and landlord's earnings on completely rented farms		
Tenant's labor and management earnings	$____	$____ f/
Landlord's returns for capital and management	____	____

a/ Average of all 141 accounting farms.
b/ Average of farms with similar value for improved land, Table 2.
c/ Average of farms of similar size, Table 4.
d/ Average of farms with similar source of income, Table 3.
e/ Average of farms of similar size and with similar amount of feed fed, Table 5.
f/ Average of farms of similar tenure and size, Table 6.

USE THIS CHART TO STUDY YOUR BUSINESS
Accounting Farms in Farming-Type Area 1, 1944

The double line across the middle of the page represents the average for farms which are similar to your farm for the indicated factor. By drawing a line across each column at the place where your farm stands in that factor, you can compare your efficiency with that of other similar accounting farms in your area.

	Factors that affect gross earnings							Factors that affect expenses				Organization of farm		
	Crop yields			Livestock										
Rate earned on investment, percent	Corn, bu.	Oats, bu.	Soybeans, bu.	Returns per $100 feed fed	Hog returns per litter farrowed	Dairy returns per cow milked	Egg returns per hen	Labor cost per crop acre	Horse and machinery cost per crop acre	Land improvement cost per acre	Building cost per acre	Acres in farm	Percent of tillable land in hay and pas.	Feed fed per acre to prod. livestock
23.8	83	77	34				5.54			.32		403		
20.8	78	72	32				5.24			.62		363		
17.8	73	67	30				4.94			.92		323		
14.8	68	62	28				4.64			1.22		283		
11.8	63	57	26				4.34			1.52		243		
8.8	58	52	24				4.04			1.82		203		
5.8	53	47	22				3.74			2.12		163		
2.8	48	42	20				3.44			2.42		123		
-.2	43	37	18				3.14			2.72		83		
-3.2	38	32	16				2.84			3.02		43		
-6.2	33	27	14				2.54			3.32		3		
* 3%	5 bu.	5 bu.	2 bu.	$15	$15	$25	.30	$2	$2	.30	.50	40	5%	$4

*Each space between lines represents the value indicated at bottom of each column.

(Higher values are recorded above the center of the page and lower values below, except for expenses, which are recorded in the opposite direction.)

Value of improved land. As the average value per acre of improved land increased from $61 to $132, the tillable land in corn increased from 37 percent to 47 percent, whereas the tillable land in hay and pasture decreased from 41 percent to 19 percent. Table 2 will enable you to compare your land use with that for other farms having about the same value for improved land.

TABLE 2.--USE OF TILLABLE LAND AND OTHER FACTORS RELATED TO THE VALUE PER ACRE OF IMPROVED LAND
Accounting Farms in Farming-Type Area 1, 1944

Item	Value of improved land per acre					
	$55 to $65	$66 to $79	$80 to $93	$94 to $107	$108 to $121	$122 to $182
Number of farms...............	8	14	28	46	26	19
Average value of improved land	$61	$74	$86	$100	$114	$132
Percent of land area tillable.	82.9%	77.0%	82.4%	80.6%	86.1%	89.0%
Percent of tillable land in:						
Corn.......................	36.9	38.0	37.9	40.3	45.3	47.4
Oats.......................	18.4	22.0	19.6	22.0	20.2	21.6
Wheat......................	.7	.4	.2	.1	.4	1.1
Soybeans...................		1.6	2.3	3.3	3.4	8.2
Other crops................	3.3	5.3	1.9	1.6	4.3	2.3
Total hay and pasture a/......	40.7	32.7	38.1	32.7	26.4	19.4
Net earnings per acre.........	$15.15	$18.49	$22.29	$17.82	$24.67	$18.40

a/ Includes clover and grass seed crops.

Crop yields. Because of wide variations from county to county in percentages of land area tillable and in soil treatments and weather conditions in 1944, there was no definite relationship between the per-acre value of improved land and per-acre yields for corn, oats, and soybeans. Therefore, average per-acre yields for all accounting farms in the area are suggested as standards for your farm (Table 1).

Important factors influencing crop yields are cultural practices, selection of seeds, and condition of land as affected by erosion and weeds, and the presence or absence of sufficient organic matter, nitrates, phosphates, potash, and other plant food elements. These factors are partially or completely subject to control. They are responsible for wide variations in crop yields from farm to farm under comparable soil types and weather conditions.

Source of income. Relative profit from various types of farming changes from year to year, depending on conditions affecting production and price. Therefore, averages for one year should not be the basis for reorganizing the farm business. In 1944 conditions were less favorable for hogs and cattle than for dairy or general farming, and the hog and cattle farms showed the lowest rate earned on the investment. The dairymen milked 28 cows and received $277 dairy returns per cow.

TABLE 3.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 1, 1944

Item	Source of income		
	Dairy Sales 40%+	Hogs and, or Cattle 40%+	General Farms
Number of farms	91	36	14
Acres in farm	179	248	242
Rate earned on investment	10.2%	6.3%	10.4%
Feed fed per acre	$ 39.35	$ 64.12	$ 21.90
Livestock returns			
Per $100 feed fed	$151	$112	$131
Hog returns per litter	208	233	252
Dairy returns per cow	277	233	226
Number of litters	9	29	10
Number of hens	165	146	188
Number of cows milked	28	6	10

Size of farm. Rate earned on investment and net earnings per acre showed no consistent variations with size of farm. But since the average rate earned on investment was relatively high, labor and management earnings increased as the average size of farm increased (Table 4).

TABLE 4--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 1, 1944

Item	Total acres in farm			
	71 to 120	121 to 180	181 to 240	241 to 731
Number of farms	20	48	45	28
Acres in farm	99	155	208	351
Rate earned on investment	8.2%	8.3%	9.6%	8.4%
Labor and management earnings	$1 947	$2 530	$3 492	$4 110
Net earnings per acre	18.05	19.02	21.61	19.83
Building cost per acre	4.22	3.49	3.27	3.47
Total months of labor	17.4	23.0	26.0	34.4

Labor, horse and machinery costs per crop acre. Increasing amounts of livestock on farms require larger expenses for labor and for horses and machinery; farmers reduced their labor and horse and machinery costs per crop acre by operating more acres (Table 5).

TABLE 5.--LABOR COST PER CROP ACRE AND HORSE AND MACHINERY COST PER CROP ACRE FOR VARIATIONS IN SIZE OF FARM AND AMOUNT OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK
Accounting Farms in Farming-Type Area 1, 1944

Acres per farm	Milk cows per 100 acres			Milk cows per 100 acres		
	Less than 11	11 to 15.9	16 or more	Less than 11	11 to 15.9	16 or more
	(labor cost per crop acre)			(horse and machinery cost per crop acre)		
Less than 121	$24.95	$28.90	$30.40	$16.05	$17.10	$18.85
121 to 180.9	17.35	24.40	29.10	13.85	15.00	17.60
181 to 240.9	16.70	23.30	26.45	12.90	14.50	16.50
241 or more	15.75	18.70	20.75	11.50	13.75	15.00

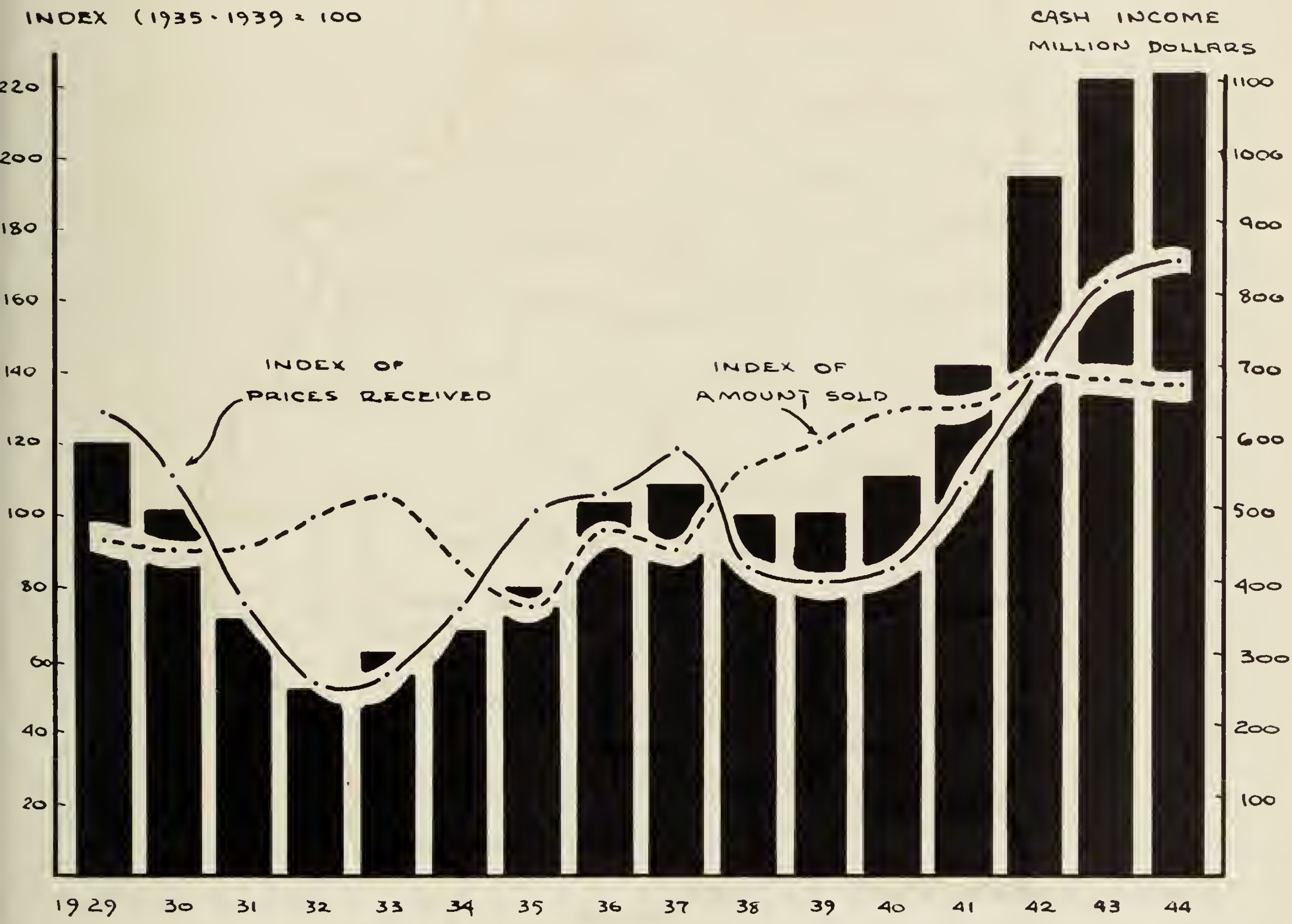
Earnings by Tenure. Farms operated on a livestock-share basis had a higher percentage of land area tillable, had about the same percentage of tillable land in grain, fed more feed per acre to productive livestock, and showed higher corn yields than the farms operated on a cash-rent basis.

The tenants on a cash-rent basis had much higher labor and management earnings with slightly higher investments than the tenants on a livestock-share basis, whereas the landlords with cash rent leases showed a much lower rate earned on investment. Tenants' labor and management earnings, regardless of lease, increased with increase in size of farm.

TABLE 6.--TENANT'S AND LANDLORD'S EARNINGS ON COMPLETELY RENTED FARMS
Accounting Farms in Farming-Type Area 1, 1944

Item	Cash rental farm lease		Livestock-share lease	
	100-180.9 acres	181-368.1 acres	80-180.9 acres	181-436.1 acres
Number of farms	14	9	13	16
Acres per farm	150	216	149	268
Percent of land area tillable	79.4%	79.2%	87.9%	84.9%
Percent of tillable land in grain	52.6%	56.5%	54.0%	56.8%
Feed fed per acre to prod. l. s.	$ 36.83	$ 33.85	$ 62.16	$ 49.30
Corn yields per acre, bu.	56.6	53.5	60.6	59.4
Tenant's share				
Capital invested	$10610	$14959	$ 9342	$13574
Labor and management earnings	3410	4484	1438	3036
Landlord's share				
Capital invested	$18698	$28504	$32494	$51316
Return for capital and mgt.	508	752	2398	4387
Rate earned on investment	2.7%	2.6%	7.4%	8.5%

YOUR FARM BUSINESS REPORT 1944



CASH INCOME, PRICES, AND AMOUNT SOLD, ILLINOIS, 1929-44

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FARMING-TYPE AREA TWO
Northwestern Mixed Livestock Area

NAME________________________________

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

AE-2313

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AGRICULTURAL EXPERIMENT STATION
URBANA, ILLINOIS

DEPARTMENT *of*
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The figures for your farm are shown on page 4. Various factors for your farm are compared with figures from similar farms in your area. For example, where size of farm is important in affecting a particular factor, your farm is compared with an average for farms of similar size in your part of the state.

On page 5 various measures of your farm business are shown on a thermometer chart like those used in past years. How favorably your farm compares in different items with other similar farms is shown by the height of the marks on the different columns.

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Very truly yours,

L. J. NORTON
Acting Head of Department

Annual Farm Business Report

ONE HUNDRED EIGHTY-FIVE FARMS IN FARMING-TYPE AREA 2, 1944

J. B. Cunningham, Elmer Searls, E. L. Sauer, and O. B. Brown[1]

Net farm earnings in Farming-Type Area 2 were lower in 1944 than for any other year since 1941. One hundred eighty-five farms from this mixed livestock area averaged $3,749 for operator's labor and management in 1944, whereas such earnings for 1943 averaged $5,007.

From the tables in this report, each cooperator may determine why his return for 1944 was above or below the average of other farms in the area. Whenever the factor is affected by size, source of income, value of improved land, amount of feed fed, and tenure, the records are sorted into groups and averages are run for each group. This practice permits you to compare your farm with others that are more similar to yours than is the entire group.

Yields of oats and soybeans are directly related to the quality of land; hence the average yield for these crops on farms having the same value of improved land as yours is taken as standard for your farm. This relationship is shown in Figure 2.

The returns per $100 worth of feed fed, amount of feed fed, hog returns per litter, and dairy returns per cow milked are affected by the kind and amount of livestock. If you received over 40 percent of your 1944 income from hogs, the standard return per $100 worth of feed fed for your farm is $135, the average of 40 farms with 40 percent or more of their income from hogs (Table 3).

If you operated a 160-acre farm and fed $23 worth of feed per acre in 1944, your labor cost per crop acre should have been below $18.95 in order to indicate more efficient use of labor than the average of similar farms (Table 5).

Comparisons between farms of different sizes and those with different types of tenure are shown in Tables 4 and 6, respectively.

The number of records from the different counties included in this report are shown in Figure 1.

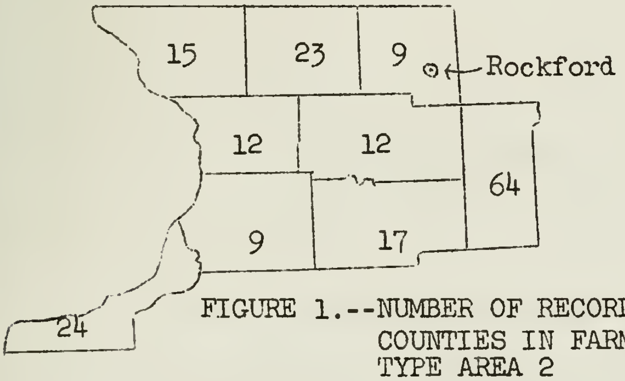

FIGURE 1.--NUMBER OF RECORDS BY COUNTIES IN FARMING-TYPE AREA 2

Farm advisers who assisted with this project in 1944 were: Carroll, M. P. Roske; DeKalb, W. C. Mummert (D. G. McAllister to February 29, 1944); Jo Daviess, H. E. Kearnaghan; Lee, C. E. Yale; Ogle, D. E. Warren; Rock Island, W. R. Taylor; Stephenson, V. J. Banter; Whiteside, F. H. Shuman; Winnebago, H. R. Brunnemeyer.

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[1] O. B. Brown supervised the closing of the accounts and the preparation of the tables used in this report.

TABLE 1.--FACTORS USED TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 2, 1944

Item	Your farm	Average of similar farms
Factors used on efficiency charts, opposite page		
Rate earned on investment	______%	11.3 %a/
Factors that affect the gross income		
Crop yields		
Corn, bu	______	______ b/
Oats, bu	______	______
Wheat, bu	______	22.3 a/
Soybeans, bu	______	______ b/
Livestock factors		
Returns per $100 worth of feed fed	$______	$______ d/
Hog returns per litter farrowed (No. litters_____)	______	______
Dairy returns per cow milked (No. cows_____)	______	______
Egg returns per hen (No. hens_____)	______	3.50 a/
Factors that affect expenses		
Labor cost per crop acre	$______	$______ e/
Horse and machinery cost per crop acre	______	______
Land improvement cost per acre	______	1.10 a/
Building cost per acre	______	______ c/
Organization of farm		
Acres in farm	______	202 a/
Percent of tillable land in hay and pasture	______%	______%b/
Feed fed per acre to productive livestock	$______	$______ d/
Other factors not used on efficiency chart		
Cash balance	$______	$5 785 a/
Total inventory change	______	-15
Net earnings per acre	______	______ b/
Labor and management earnings	______	______ c/
Value of land per acre	______	91 a/
Percent of land area tillable	______%	______%b/
Number of pigs weaned per litter	______	6.2 a/
Total months of labor (months hired_____)	______	______ c/
Tenant's and landlord's earnings on completely rented farms		
Tenant's labor and management earnings	$______	$______ f/
Landlord's return for capital and management	______	______

a/ Average of all 185 accounting farms.
b/ Average of farms with similar value for improved land, Table 2 or Figure 2.
c/ Average of farms of similar size, Table 4.
d/ Average of farms with similar source of income, Table 3.
e/ Average of farms of similar size and with similar amount of feed fed, Table 5.
f/ Average of farms of similar tenure and size, Table 6.

USE THIS CHART TO STUDY YOUR BUSINESS
Accounting Farms in Farming-Type Area 2, 1944

The double line across the middle of the page represents the average for farms which are similar to your farm for the indicated factor. By drawing a line across each column at the place where your farm stands in that factor, you can compare your efficiency with that of other similar accounting farms in your area.

	Factors that affect gross earnings								Factors that affect expenses				Organization of farm		
	Crop yields				Livestock										
Rate earned on investment, percent	Corn, bu.	Oats, bu.	Wheat, bu.	Soybeans, bu.	Returns per $100 feed fed	Hog returns per litter farrowed	Dairy returns per cow milked	Egg returns per hen	Labor cost per crop acre	Horse and machinery cost per crop acre	Land improvement cost per acre	Building cost per acre	Acres in farm	Percent of tillable land in hay and pas.	Feed fed per acre to prod. livestock
26.3			42.3					6.00			.10		452.2		
23.3			38.3					5.50			.30		402.2		
20.3			34.3					5.00			.50		352.2		
17.3			30.3					4.50			.70		302.2		
14.3			26.3					4.00			.90		252.2		
11.3			22.3					3.50			1.10		202.2		
8.3			18.3					3.00			1.30		152.2		
5.3			14.3					2.50			1.50		102.2		
2.3			10.3					2.00			1.70		52.2		
-.7			6.3					1.50			1.90		--		
-3.7			2.3					1.00			2.10		--		
*3%	5 bu.	4 bu.	4 bu.	2 bu.	$20	$15	$20	.50	$1	$1	.20	.20	50	5%	$4

*Each space between lines represents the value indicated at bottom of each column.

(Higher values are recorded above the center of the page and lower values below, except for expenses, which are recorded in the opposite direction.)

Value of improved land. Table 2 will enable you to compare your land use with that for other farms having about the same value per acre for improved land. Low-valued land is associated with a high percentage of tillable land in hay and pasture; high-valued land is associated with a lower percentage in these crops.

TABLE 2.--VALUE OF IMPROVED LAND RELATED TO USE OF TILLABLE LAND AND OTHER FACTORS
Accounting Farms in Farming-Type Area 2, 1944

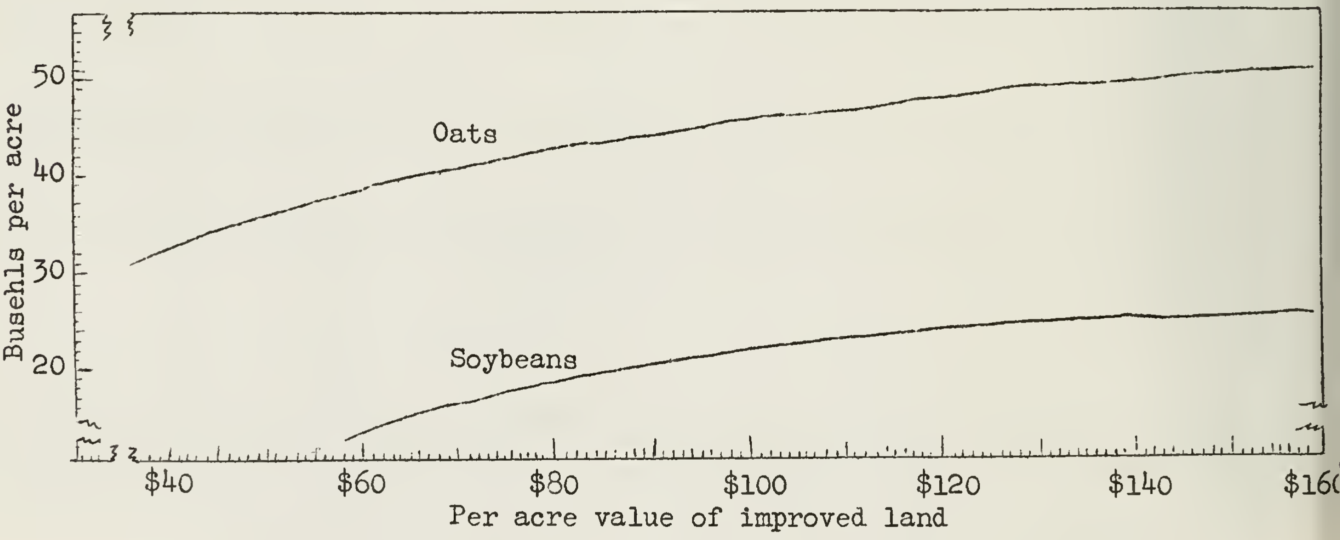
Item	Value per acre of improved land					
	$27 to $52	$53 to $72	$73 to $92	$93 to $112	$113 to $132	$133 to $200
Number of farms...............	16	28	45	40	37	19
Average value of improved land	$43	$64	$83	$102	$124	$147
Percent of land area tillable.	66.4%	71.8%	83.3%	83.5%	91.7%	94.6%
Percent of tillable land in:						
Corn......................	31.6	35.5	40.0	41.2	45.6	44.1
Oats......................	20.7	22.2	20.5	21.8	21.4	21.8
Wheat.....................	2.0	.3	1.5	.7	.5	--
Soybeans..................	--	1.6	7.5	3.8	6.2	3.8
Other crops...............	4.8	2.1	2.0	3.6	4.8	6.0
Legume hay and pasture......	21.2	22.3	16.7	17.8	12.8	16.0
Non-legume hay and pasture..	19.7	16.0	11.8	11.1	8.7	8.2
Total hay and pasture[1]...	40.9	38.3	28.5	28.9	21.5	24.2
Net earnings per acre.........	$11.02	$16.50	$19.76	$ 21.84	$ 26.42	$ 26.23

[1] Includes clover and grass seed crops.

Crop yields. Because of wide variations from county to county in percentage of land area tillable and in soil treatments and weather conditions in 1944, ther was no definite relationship between value of improved land per acre and corn yield. Average corn yield per acre for accounting farms in your county is used as the standard for your farm:

Carroll County	73.6	Lee County	62.9	Stephenson County	67.7
DeKalb County	58.6	Ogle County	73.1	Whiteside County	73.1
Jo Daviess County	62.1	Rock Island County	~~82.5~~ 65.6	Winnebago County	50.7

FIGURE 2.--RELATIONSHIP BETWEEN CROP YIELDS AND VALUE OF IMPROVED LAND PER ACRE



Source of income. Relative profit from various types of farming changes from year to year depending on conditions affecting production and price. Therefore, averages for one year should not be the basis for reorganizing the farm business. In 1944, conditions were most favorable for grain farms, and they had the highest rate earned on investment. The dairymen milked the largest mnumber of cows and received the largest returns per cow, whereas the hog farmers had the largest number of litters and received the largest hog returns per litter (Table 3).

TABLE 3.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 2, 1944

Item	Source of income				
	Grain 40%+	Dairy sales 40%+	Hogs 40%+	Hogs 40%+ & cattle 20%+ or vice versa	General farms
Number of farms..........	18	31	40	45	51
Acres in farm............	256	166	177	222	207
Rate earned on investment	13.4%	11.2%	10.7%	11.3%	11.0%
Feed fed per acre........	$ 12.33	$ 34.92	$ 32.64	$ 44.68	$ 29.63
Livestock returns					
Per $100 feed fed......	$126	$149	$135	$122	$134
Hog returns per litter.	200	222	250	239	186
Dairy returns per cow..	180	243	158	173	182
Number of litters........	9	12	19	24	14
Number of hens...........	142	147	175	183	158
Number of cows milked....	10	19	11	7	12

Size of farm. Rate earned on investment and net earnings per acre did not vary significantly with size of farm. But labor and management earnings increased as the average size of farms increased, because the average rate earned on investment was relatively high (above the 5 percent capitalization rate).

TABLE 4.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 2, 1944

Item	Total acres in farm				
	50 to 120	121 to 200	201 to 280	281 to 360	361 to 560
Number of farms..............	33	74	50	17	11
Acres in farm................	102	163	237	316	430
Rate earned on investment....	9.8%	11.3%	11.4%	10.7%	12.9%
Labor and management earnings	$2 274	$3 418	$4 214	$4 533	$7 078
Net earnings per acre........	19.11	22.51	21.08	18.58	21.50
Building cost per acre.......	2.24	2.12	1.73	1.51	1.50
Total months of labor........	15.3	18.3	21.7	25.6	31.9

Labor, horse and machinery costs per crop acre. Increasing amounts of livestock on farms require larger expenses for labor and for horses and machinery; farmers reduced their labor and horse and machinery costs per crop acre by operating more acres (Table 5).

TABLE 5.--LABOR COST AND HORSE AND MACHINERY COST PER CROP ACRE FOR DIFFERENT SIZE FARMS AND DIFFERENT AMOUNTS OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK
Accounting Farms in Farming-Type Area 2, 1944

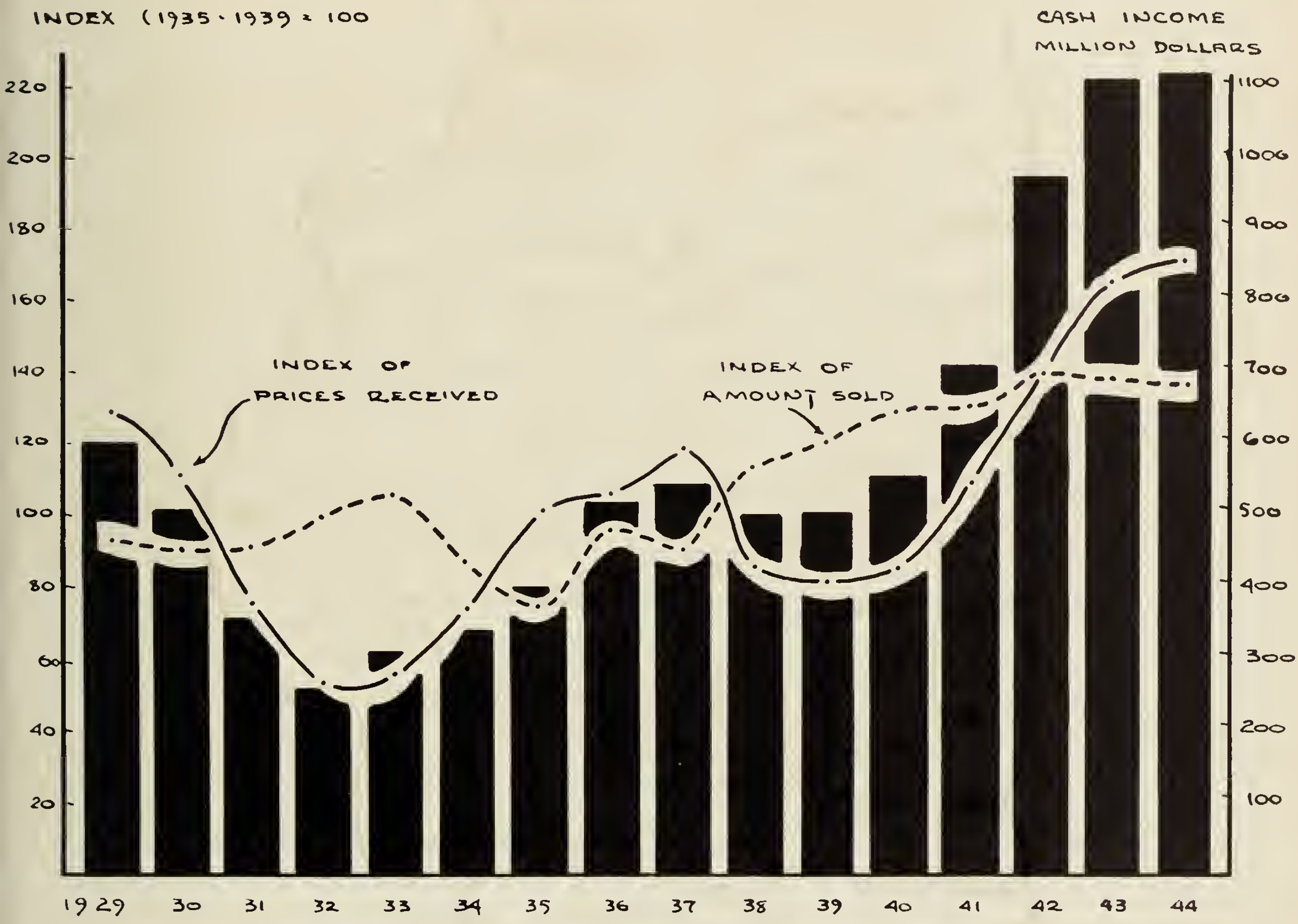
	Feed fed per acre				Feed fed per acre			
Acres per farm	Less than $18.00	$18.00 to $27.99	$28.00 to $37.99	$38.00 or more	Less than $18.00	$18.00 to $27.99	$28.00 to $37.99	$38.00 or more
	(labor cost per crop acre)				(horse and machinery cost per crop acre)			
Less than 121..	$18.80	$20.20	$22.20	$27.20	$11.10	$11.50	$13.05	$13.50
121 to 200.9...	18.00	18.95	19.75	20.10	9.65	10.60	11.10	11.65
201 to 280.9...	13.20	13.75	14.25	15.30	8.35	8.80	9.90	10.85
281 to 360.9...	12.65	13.20	13.75	14.30	6.65	8.45	9.50	10.45
361 or more....	9.25	10.85	11.90	14.00	5.55	7.20	8.90	9.75

Earnings by tenures. Tenants with livestock-share leases on both large and small farms had less capital invested and showed lower labor and management earnings than tenants with either crop-share cash leases or cash rental leases. The landlord's returns for capital and management and rate earned on investment were much higher for the livestock-share farms than for either of the other types of leases.

TABLE 6.--TENANT'S AND LANDLORD'S EARNINGS ON COMPLETELY RENTED FARMS
Accounting Farms in Farming-Type Area 2, 1944

	Crop-share cash lease	Cash rent lease	Livestock-share farm lease	
Item	120 to 320.1 acres	80 to 387.1 acres	Less than 201 acres	201 or more acres
Number of farms.....	6	20	26	29
Acres per farm......	209	180	159	261
Percent of land area tillable.....	86.4%	77.2%	86.8%	80.3%
Percent of tillable land in grain.....	69.6%	61.9%	60.6%	64.7%
Feed fed per acre to prod. l. s.....	$ 25.28	$ 39.45	$ 34.98	$ 31.38
Corn yields per acre, bu..........	62.7	64.4	70.8	56.6
Tenant's share				
Capital invested..	$11 489	$12 649	$ 6 381	$11 199
Labor and management earnings...	3 018	3 330	2 275	2 324
Landlord's share				
Capital invested..	$27 624	$18 231	$24 693	$37 258
Return for capital and management..	2 270	681	2 896	3 997
Rate earned on investment......	8.2%	3.7%	11.7%	10.7%

YOUR FARM BUSINESS REPORT 1944



CASH INCOME, PRICES, AND AMOUNT SOLD, ILLINOIS, 1929-44

Since 1929, cash income to Illinois farmers and prices received for products sold have followed the same general trends, dropping to a depression low in 1932 and rising to a wartime high in 1944. Amount of products sold has varied far less than prices received but has been on a high level since 1938.

FARMING-TYPE AREA THREE

Western Livestock and Grain Area

NAME____

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

AE-2314

UNIVERSITY *of* ILLINOIS
COLLEGE *of* AGRICULTURE
AGRICULTURAL EXPERIMENT STATION
URBANA, ILLINOIS

DEPARTMENT *of*
AGRICULTURAL ECONOMICS

June 1, 1945

Dear Cooperator:

This is an analysis of your farm business as shown in the 1944 Farm Account Book which you kept in cooperation with this department. Because we are also short-handed, we have made this report shorter than in past years. We hope you will find it valuable.

The figures for your farm are shown on page 4. Various factors for your farm are compared with figures from similar farms in your area. For example, where size of farm is important in affecting a particular factor, your farm is compared with an average for farms of similar size in your part of the state.

On page 5 various measures of your farm business are shown on a thermometer chart like those used in past years. How favorably your farm compares in different items with other similar farms is shown by the height of the marks on the different columns.

The next three pages are filled with tables and charts showing how the standards used on pages three and four were worked out.

On the inside and outside of the back cover J. B. Cunningham tells how you may use your farm accounts in planning your farm business. As we shift over from wartime farming to peacetime farming within the next two or three years, we will all need to plan carefully. Good records for your business if properly studied will aid you in doing this.

An effort was made to keep this report simple. Additional facts and figures, if needed, may be found in your 1944 farm account book or in the state summary which will appear in an early issue of Illinois Farm Economics.

Over the years we have found farm accounts valuable in helping us to understand what factors make for financial success in farming. Your careful work in keeping the accounts has made this possible.

We thank you for your continued cooperation and hope you will find this report and your account valuable.

Very truly yours,

L. J. NORTON
Acting Head of Department

Annual Farm Business Report

TWO HUNDRED FORTY-NINE FARMS IN FARMING-TYPE AREA 3, 1944

J. B. Cunningham, Elmer Searls, and O. B. Brown[1]

Net farm earnings in Farming-Type Area 3 were lower in 1944 than for any other year since 1941. Two hundred forty-nine farms from this livestock and grain area averaged $4,126 for operator's labor and management in 1944, whereas, such earnings for 1943 averaged $5,126.

From the tables in this report, each cooperator may determine why his return for 1944 was above or below the average of other farms in the area. Whenever the factor is affected by size, source of income, value of improved land, amount of feed fed, and tenure, the records are sorted into groups and averages are run for each group. This practice permits you to compare your farm with others that are more similar to yours than is the entire group.

Yields of corn, oats and soybeans are directly related to the quality of land; hence the average yield for these crops on farms having the same value of improved land as yours is taken as standard for your farm. This relationship is shown in Figure 2.

The returns per $100 worth of feed fed, amount of feed fed, hog returns per litter, and dairy returns per cow milked are affected by the kind and amount of livestock. If you received over 40 percent of your 1944 income from hogs, the standard return per $100 worth of feed fed for your farm is $134, the average of 114 farms with 40 percent or more of their income from hogs (Table 3).

If you operated a 160-acre farm and fed $24 worth of feed per acre in 1944, your labor cost per crop acre should have been below $17 in order to indicate more efficient use of labor than the average of similar farms (Table 5).

Comparisons between farms of different sizes and those with different types of tenure are shown in Tables 4 and 6, respectively.

The number of records from the different counties included in this report are shown in Figure 1.

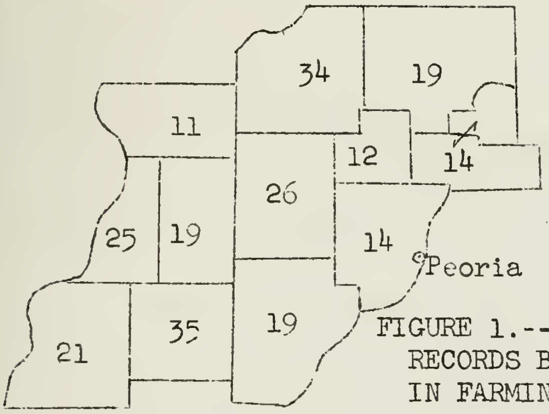


FIGURE 1.--NUMBER OF RECORDS BY COUNTIES IN FARMING-TYPE AREA 3

Farm advisers who assisted with this project were: Bureau, Paul V. Dean; Fulton, J. E. Watt; Hancock, L. L. Norton; Henderson, A. J. Rehling; Henry, H. K. Danforth; Knox, A. R. Kemp; Marshall-Putnam, L. J. Hager; McDonough, R. G. Benbow; Mercer, E. M. Edwards; Peoria, I. F. Green; Stark, Wayne A. Gilbert; Warren, E. H. Walworth.

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[1] O. B. Brown supervised the closing of the accounts and the preparation of the tables used in this report.

TABLE 1.--FACTORS USED TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 3, 1944

Item	Your farm	Average of similar farms
Factors used on efficiency charts, opposite page		
Rate earned on investment	%	12.0 % a/
Factors that affect the gross income		
Crop yields		
Corn, bu		b/
Oats, bu		
Wheat, bu		23.2 a/
Soybeans, bu		b/
Livestock factors		
Returns per $100 worth of feed fed	$	$ d/
Hog returns per litter farrowed (No. litters_____)		
Dairy returns per cow milked (No. cows_____)		
Egg returns per hen (No. hens _____)		3.23 a/
Factors that affect expenses		
Labor cost per crop acre	$	$ e/
Horse and machinery cost per crop acre		
Land improvement cost per acre		.81 a/
Building cost per acre		c/
Organization of farm		
Acres in farm		227 a/
Percent of tillable land in hay and pasture	%	% b/
Feed fed per acre to productive livestock	$	$ d/
Other factors not used on efficiency chart		
Cash balance	$	$5 622 a/
Total inventory change		498
Net earnings per acre		b/
Labor and management earnings		c/
Value of land per acre		98 a/
Percent of land area tillable	%	% b/
Number of pigs weaned per litter		6.2 a/
Total months of labor (months hired_____)		c/
Tenant's and landlord's earnings on completely rented farms		
Tenant's labor and management earnings	$	$ f/
Landlord's returns for capital and management		

a/ Average of all 249 accounting farms.
b/ Average of farms with similar value for improved land, Table 2 or Figure 2.
c/ Average of farms of similar size, Table 4.
d/ Average of farms with similar source of income, Table 3.
e/ Average of farms of similar size and with similar amount of feed fed, Table 5.
f/ Average of farms of similar tenure and size, Table 6.

USE THIS CHART TO STUDY YOUR BUSINESS
Accounting Farms in Farming-Type Area 3, 1944

The double line across the middle of the page represents the average for farms which are similar to your farm for the indicated factor. By drawing a line across each column at the place where your farm stands in that factor, you can compare your efficiency with that of other similar accounting farms in your area.

	Factors that affect gross earnings								Factors that affect expenses				Organization of farm		
	Crop yields				Livestock										
Rate earned on investment, percent	Corn, bu.	Oats, bu.	Wheat, bu.	Soybeans, bu.	Returns per $100 feed fed	Hog returns per litter farrowed	Dairy returns per cow milked	Egg returns per hen	Labor cost per crop acre	Horse and machinery cost per crop acre	Land improvement cost per acre	Building cost per acre	Acres in farm	Percent of tillable land in hay and pas.	Feed fed per acre to prod. livestock
32.0			38.2					5.73			--		427		
28.0			35.2					5.23			.01		387		
24.0			32.2					4.73			.21		347		
20.0			29.2					4.23			.41		307		
16.0			26.2					3.73			.61		267		
12.0			23.2					3.23			.81		227		
8.0			20.2					2.73			1.01		187		
4.0			17.2					2.23			1.21		147		
0			14.2					1.73			1.41		107		
-4.0			11.2					1.23			1.61		67		
-8.0			8.2					.73			1.81		27		
* 4%	5 bu.	4 bu.	3 bu.	3 bu.	$20	$20	$20	.50	$2	$1	.20	.30	40	5%	$3

*Each space between lines represents the value indicated at bottom of each column.

(Higher values are recorded above the center of the page and lower values below, except for expenses, which are recorded in the opposite direction.)

Value of improved land. As the value per acre of improved land increased from $46 to $156 the percent of land area tillable increased from 57 percent to 86 percent; and the net earnings per acre increased from $8.63 to $26.37. On the other hand, the percent of tillable land in hay and pasture, decreased from about 39 percent to about 23 percent.

TABLE 2.--USE OF TILLABLE LAND AND OTHER FACTORS RELATED TO THE VALUE OF IMPROVED LAND
Accounting Farms in Farming-Type Area 3, 1944

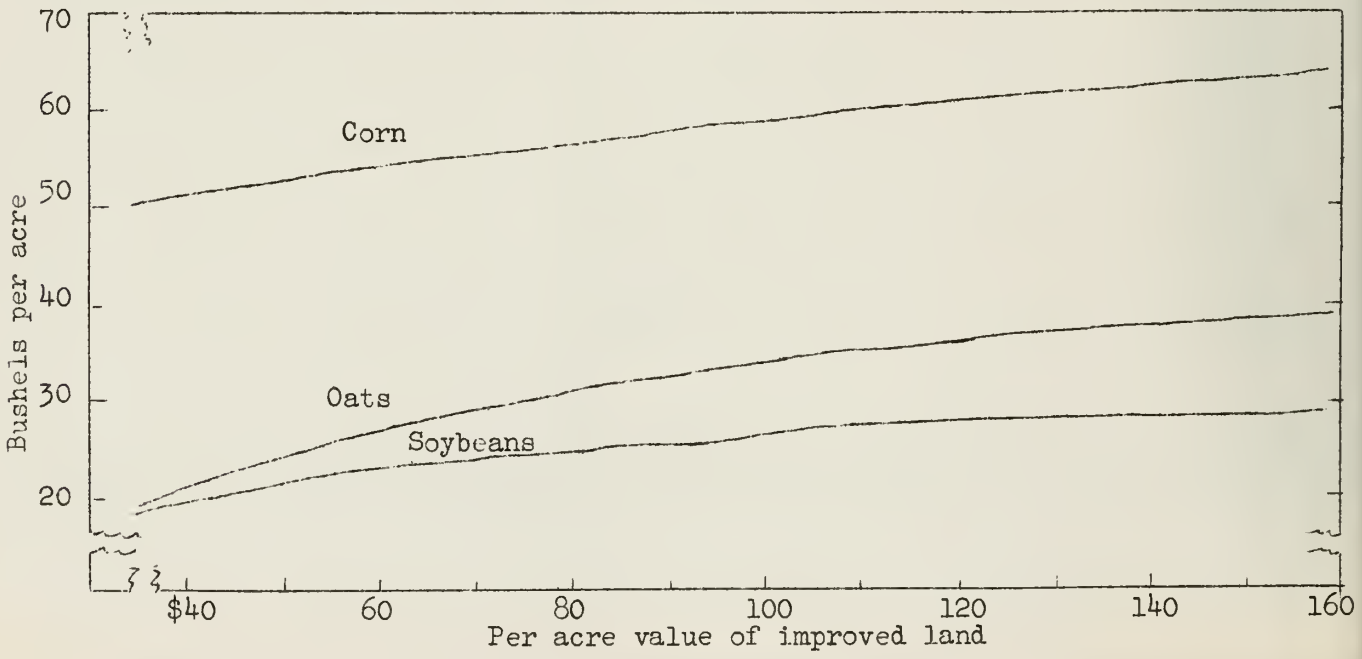
Item	Value of improved land					
	$38 to $52	$53 to $72	$73 to $92	$93 to $112	$113 to $132	$133 to $214
Number of farms	12	20	43	74	61	39
Average value of improved land	$46	$65	$84	$102	$122	$156
Percent of land area tillable	57.0%	61.0%	76.7%	81.8%	87.5%	86.5%
Percent of tillable land in:						
Corn	42.1	47.3	42.8	44.0	42.8	51.9
Oats	8.1	11.3	11.8	15.0	17.4	14.7
Wheat	3.5	2.4	1.8	1.5	1.0	.5
Soybeans	5.5	8.9	12.2	12.7	11.5	9.4
Other crops	2.0	2.2	1.3	.5	1.4	.6
Legume hay and pasture	15.4	21.7	19.1	17.9	16.6	14.9
Non-legume hay and pasture	23.4	6.2	11.0	8.4	9.3	8.0
Total hay and pasture[1]	38.8	27.9	30.1	26.3	25.9	22.9
Net earnings per acre	$ 8.63	$13.88	$18.41	$ 21.25	$ 24.05	$ 26.37

1/ Includes clover and grass seed crops.

Crop yields. Corn yields increased with value of improved land; the relationship between yield and value was greater for oats and less for soybeans (Figure 2)

As the value of improved land increased from $40 to $130 an acre, the corn yield increased about one bushel an acre for each $10.00 increase in value, however, this increase became less as value increased. With increases of $10 an acre for improved land over $130 there was an increase in corn yields of only about one half bushel an acre.

FIGURE 2.--RELATIONSHIP BETWEEN CROP YIELDS AND VALUE OF IMPROVED LAND/ACRE



Source of income. The relative profit from various types of farming changes from year to year depends on conditions affecting production and price. In 1944, conditions were most favorable for grain farms and they had the highest rate earned on investment. The general farms had the lowest. Feed fed per acre averaged $32.03 on the hog farms where the returns per $100 feed fed averaged $134.

TABLE 3.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 3, 1944

Item	Source of income			
	Grain 40%+	Hogs only 40%+	Hogs 40%+ and cattle 20%+ or vice versa	General farms
Number of farms...........	38	114	60	37
Acres in farm.............	283	197	260	208
Rate earned on investment.	14.0%	12.2%	11.2%	10.6%
Feed fed per acre.........	$ 13.20	$ 32.03	$ 38.98	$ 23.03
Livestock returns				
Per $100 feed fed.......	$117	$134	$130	$136
Hog returns per litter..	219	220	215	197
Dairy returns per cow...	141	161	149	175
Number of litters........	14	28	30	15
Number of hens............	115	128	120	152
Number of cows milked.....	7	7	6	9

Size of farm. The 71 farmers in the 201- to 280-acre group used three months more labor than the 103 farmers in the 121- to 200-acre group and received $1,153 more for their labor and management; their farms also averaged about one-half again as large (Table 4). Rate earned on investment increased with size of farm.

TABLE 4.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 3, 1944

Item	Total acres in farm				
	50 to 121 100	121 to 200	201 to 280	281 to 360	361 to 1 113
Number of farms..........	28	103	71	23	24
Acres in farm............	101	165	242	329	497
Rate earned on investment	9.6%	10.5%	11.9%	12.7%	15.0%
Labor and management earnings................	$2 303	$3 062	$4 215	$5 819	$8 934
Net earnings per acre....	19.13	19.92	20.52	22.46	22.65
Building cost per acre...	1.79	1.47	1.40	1.10	1.01
Total months of labor....	14.8	17.8	20.8	25.5	33.4

Labor, horse and machinery costs per crop acre. Increasing amounts of livestock on farms require larger expenses for labor and for horses and machinery; farmers reduced their labor and horse and machinery costs per crop acre by operating more acres (Table 5).

TABLE 5.--LABOR COST AND HORSE AND MACHINERY COST PER CROP ACRE FOR FARMS OF DIFFERENT SIZES AND DIFFERENT AMOUNTS OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK
Accounting Farms in Farming-Type Area 3, 1944

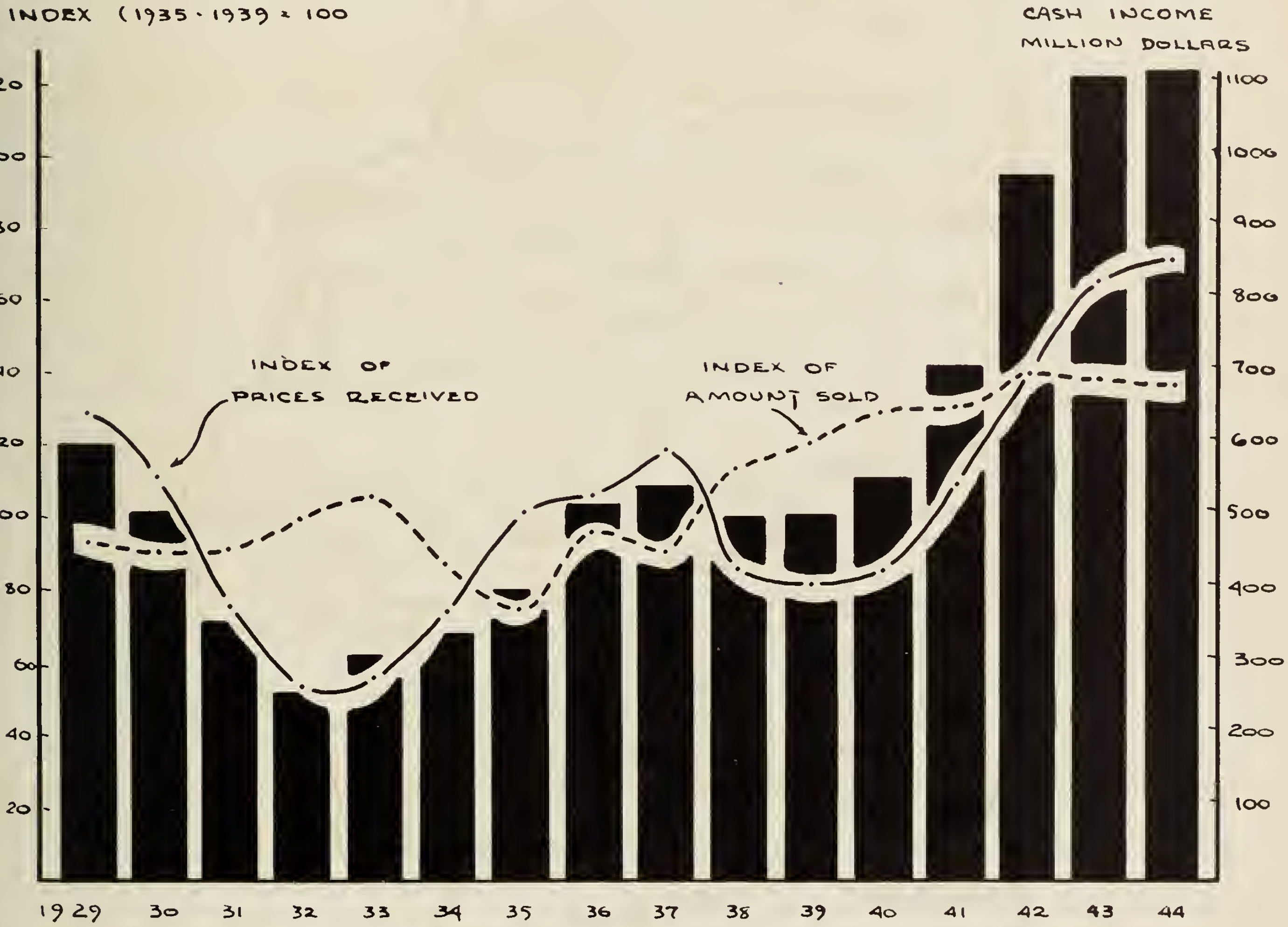
Acres per farm	Feed fed per acre				Feed fed per acre			
	Less than $20.00	$20.00 to $27.99	$28.00 to $35.99	$36.00 or more	Less than $20.00	$20.00 to $27.99	$28.00 to $35.99	$36.00 or more
	(labor cost per crop acre)				(horse and machinery cost per crop acre)			
Less than 121.	$20.95	$22.15	$24.95	$25.50	$9.55	$10.30	$10.90	$15.85
121 to 200.9..	15.55	17.00	18.55	19.30	9.25	10.00	10.50	12.00
201 to 280.9..	14.20	14.80	15.65	16.60	8.30	8.75	9.40	9.95
281 to 360.9..	11.40	12.25	13.95	14.40	6.90	7.60	8.65	9.55
361 or more...	10.90	11.70	13.00	13.60	6.35	7.15	7.95	9.10

Earnings by tenure. Tenants with livestock-share leases had somewhat lower capital investments than tenants with crop-share cash leases but they had higher labor and management earnings. Both tenants and landlords had higher earnings on larger farms for both tenure groups. Landlords had higher capital investments on the livestock-share farms but the rates earned on landlord's capital were similar for both tenure groups. The livestock-share farms were on somewhat lower priced land as indicated by (1) smaller percent of land area tillable, and (2) smaller percent of tillable land in grain.

TABLE 6.--TENANT'S AND LANDLORD'S EARNINGS ON COMPLETELY RENTED FARMS
Accounting Farms in Farming-Type Area 3, 1944

Item	Crop-share cash farm lease		Livestock-share farm lease	
	79 to 200 acres	201 to 501 acres	116 to 200 acres	201 to 560 acres
Number of farms.................	31	16	15	21
Acres per farm..................	151	297	168	310
Percent of land area tillable...	89.3%	82.0%	82.6%	75.0%
Percent of tillable land in grain	76.3%	78.2%	70.6%	71.5%
Feed fed per acre to prod. l.s..	$ 32.54	$ 21.49	$ 38.64	$ 31.90
Corn yield per acre, bu.........	59.5	61.0	59.7	58.5
Tenant's share				
Capital invested.............	$ 8 294	$12 618	$ 6 695	$ 9 823
Labor and management earnings.	2 246	3 373	2 319	3 567
Landlord's share				
Capital invested.............	$23 002	$36 626	$25 110	$39 254
Return for capital and mgt....	2 353	4 604	2 674	4 894
Rate earned on investment.....	10.2%	12.6%	10.6%	12.5%

YOUR FARM BUSINESS REPORT 1944



CASH INCOME, PRICES, AND AMOUNT SOLD, ILLINOIS, 1929-44

Since 1929, cash income to Illinois farmers and prices received for products sold have followed the same general trends, dropping to a depression low in 1932 and rising to a wartime high in 1944. Amount of products sold has varied far less than prices received but has been on a high level since 1938.

FARMING-TYPE AREA FOUR

East Central Cash Grain Area

NAME____

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

AE-2315

UNIVERSITY of ILLINOIS
COLLEGE of AGRICULTURE
AGRICULTURAL EXPERIMENT STATION
URBANA, ILLINOIS

DEPARTMENT of
AGRICULTURAL ECONOMICS

June 1, 1945

Dear Cooperator:

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We thank you for your continued cooperation and hope you will find this report and your account valuable.

Very truly yours,

L. J. NORTON
Acting Head of Department

Annual Farm Business Report

FOUR HUNDRED FIFTY-TWO FARMS IN FARMING-TYPE AREA 4, 1944

J. B. Cunningham, Elmer Searls, E. L. Sauer, and O. B. Brown[1]

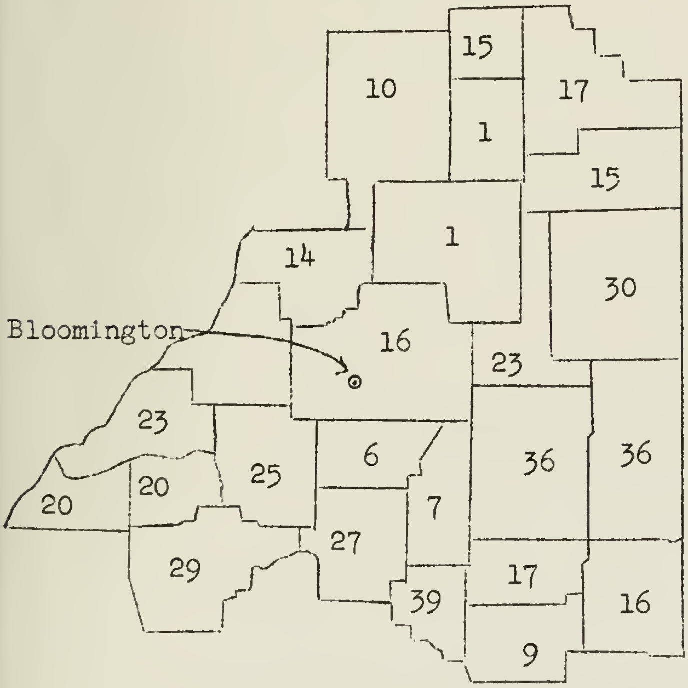
Net farm earnings in Farming-Type Area 4 were lower in 1944 than for any other year since 1940. Four hundred fifty-two farms from this cash grain farming area average $4,111 for operator's labor and management in 1944, whereas such earnings for 1943 averaged $5,646, the wartime high.

From the tables in this report, each cooperator may determine why his return for 1944 was above or below the average of other farms in the area. Whenever the factor is affected by size, source of income, value of improved land, amount of feed fed, and tenure the records are sorted into groups and averages are run for each group. This practice permits you to compare your farm with others that are more similar to yours than is the entire group.

Yields of corn, wheat and soybeans are directly related to the quality of land, hence the average yield for these crops on farms having the same value of improved land as yours is taken as standard for your farm. This relationship is shown in Figure 2.

The returns per $100 worth of feed fed, amount of feed fed, hog returns per litter and dairy returns per cow milked are affected by the kind and amount of livestock. If you received over 40 percent of your 1944 income from hogs, the standard return per $100 worth of feed fed for your farm is $130, the average of 74 farms with 40 percent or more of their income from hogs (Table 3).

Comparisons between farms of different sizes, feed fed, and those with different types of tenure are shown in Tables 4, 5, and 6, respectively.



Farm advisers who assisted with the project were: Moultrie, Paul M. Krows; Champaign, J. E. Harris; Vermilion, I. E. Parrett; Iroquois, H. D. Van Matre; Sangamon, Edwin Bay; Macon, J. R. Gilkey; Logan, N. H. Anderson; Mason, R. V. Watson; Ford, H. D. Triplett; Cass, G. H. Husted; Menard, L. W. Chalcraft; Douglas, J. Q. Scott; Will, J. H. Brock; Edgar, L. E. McKinzie; Kankakee, G. T. Swaim; Kendall, W. P. Miller; LaSalle, F. A. Painter; Woodford, T. Hugh Brock; Coles, W. S. Myers; Piatt, E. O. Johnston; DeWitt, H. N. Myers.

FIGURE 1.--NUMBER OF RECORDS BY COUNTIES IN FARMING-TYPE AREA 4

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[1] O. B. Brown supervised the closing of the accounts and the preparation of the tables used in this report.

TABLE 1.--FACTORS USED TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 4, 1944

Item	Your farm	Average of similar farms
Factors used on efficiency charts, opposite page		
Rate earned on investment	____%	10.9 % a/
Factors that affect the gross income		
Crop yields		
Corn, bu	____	____ b/
Oats, bu	____	____
Wheat, bu	____	22 a/
Soybeans, bu	____	____ b/
Livestock factors		
Returns per $100 worth of feed fed	$____	$____ d/
Hog returns per litter farrowed (No. litters____)	____	____
Dairy returns per cow milked (No. cows____)	____	____
Egg returns per hen (No. hens____)	____	3.30 a/
Factors that affect expenses		
Labor cost per crop acre	____	____ e/
Machinery, equipment and horse cost per crop acre	____	____
Land improvement cost per acre	____	.85 a/
Building cost per acre	____	____ c/
Organization of farm		
Acres in farm	____	270 a/
Percent of tillable land in hay and pasture	____%	____% b/
Feed fed per acre to productive livestock	$____	$____ d/
Other factors not used on efficiency chart		
Cash balance	$____	$7 100 a/
Total inventory change	____	-574
Net earnings per acre	____	____ b/
Labor and management earnings	____	____ c/
Value of land per acre	____	114 a/
Percent of land area tillable	____%	____% b/
Percent of tillable land in corn and soybeans	____%	____%
Number of pigs weaned per litter	____	6.3 a/
Total months of labor (months hired____)	____	____ c/
Tenant's and landlord's earnings on completely rented farms		
Tenant's labor and management earnings	$____	$____ f/
Landlord's returns for capital and management	____	____

---

a/ Average of all 452 accounting farms.
b/ Average of farms with similar value for improved land, Table 2 or Figure 2.
c/ Average of farms of similar size, Table 4.
d/ Average of farms with similar source of income, Table 3.
e/ Average of farms of similar size and with similar amount of feed fed, Table 5.
f/ Average of farms of similar size and similar leases, Table 6.

USE THIS CHART TO STUDY YOUR BUSINESS
Accounting Farms in Farming-Type Area 4, 1944

The double line across the middle of the page represents the average for farms which are similar to your farm for the indicated factor. By drawing a line across each column at the place where your farm stands in that factor, you can compare your efficiency with that of other similar accounting farms in your area.

	Factors that affect gross earnings								Factors that affect expenses				Organization of farm		
	Crop yields				Livestock										
Rate earned on investment, percent	Corn, bu.	Oats, bu.	Wheat, bu.	Soybeans, bu.	Returns per $100 feed fed	Hog returns per litter farrowed	Dairy returns per cow milked	Egg returns per hen	Labor cost per crop acre	Horse and machinery cost per crop acre	Land improvement cost per acre	Building cost per acre	Acres in farm	Percent of tillable land in hay and pas.	Feed fed per acre to prod. livestock
25.9			32					5.30			--		520		
22.9			30					4.90			.05		470		
19.9			28					4.50			.25		420		
16.9			26					4.10			.45		370		
13.9			24					3.70			.65		320		
10.9			22					3.30			.85		270		
7.9			20					2.90			1.05		220		
4.9			18					2.50			1.25		170		
1.9			16					2.10			1.45		120		
-1.1			14					1.70			1.65		70		
-4.1			12					1.30			1.85		20		
* 3%	5 bu.	4 bu.	2 bu.	3 bu.	$20	$20	$20	.40	$1	$1	.20	.30	50	3%	$3

*Each space between lines represents the value indicated at bottom of each column.

(Higher values are recorded above the center of the page and lower values below, except for expenses, which are recorded in the opposite direction.)

Land use. As the average per-acre value of improved land increased from $45 to $157, the tillable land area increased from 80 percent to 94.7 percent; the tillable land in corn and soybeans increased from 45.4 percent to 67.7 percent; and the net earnings per acre increased from $7.98 to $25.31. On the other hand, total hay and pasture decreased from 23.8 percent to 16.7 percent.

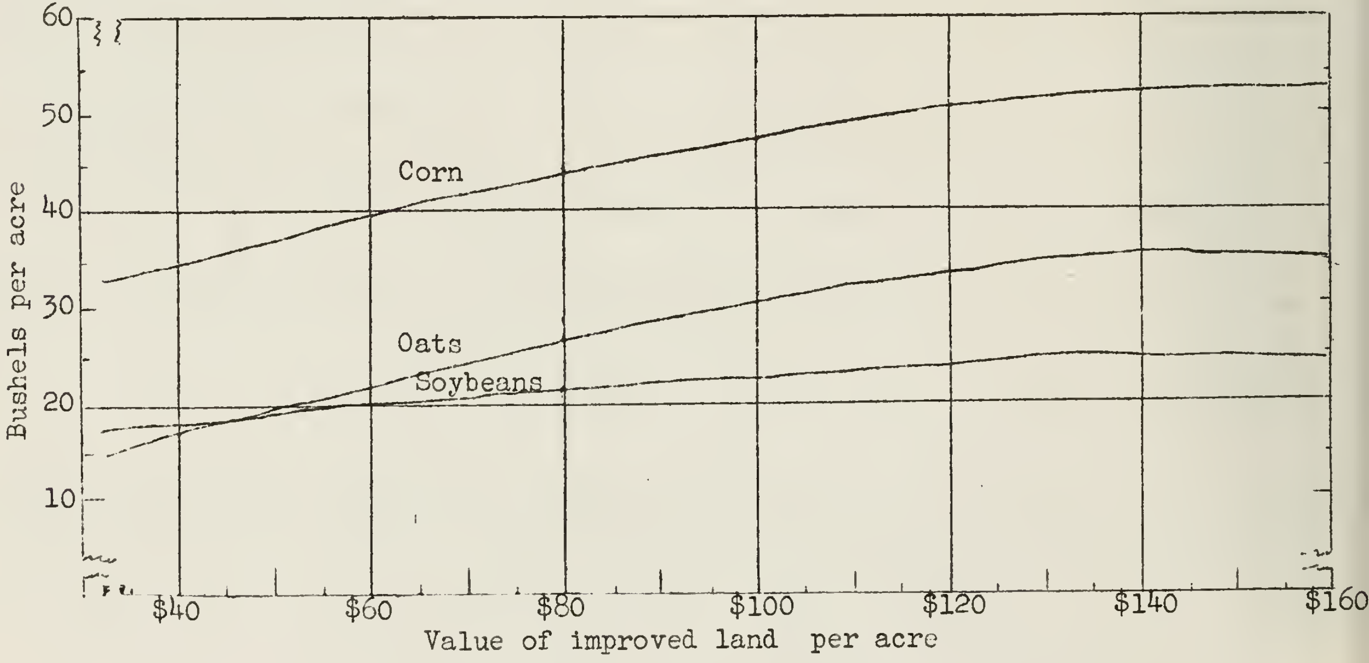
TABLE 2.--USE OF TILLABLE LAND AND OTHER FACTORS RELATED TO THE VALUE OF IMPROVED LAND
Accounting Farms in Farming-Type Area 4, 1944

Item	Value of improved land per acre					
	$25 to $62	$63 to $82	$83 to $102	$103 to $122	$123 to $142	$143 to $250
Number of farms................	14	40	103	70	132	93
Average value of improved land.	$45	$74	$ 95	$114	$130	$157
Percent of land area tillable..	80.0%	80.6%	87.9%	90.1%	92.5%	94.7%
Percent of tillable land in:						
Corn..........................	30.0	38.2	36.8	39.0	38.4	38.1
Soybeans......................	15.4	14.6	21.0	22.2	24.8	29.6
Oats..........................	7.6	13.9	13.2	12.7	13.3	12.7
Wheat.........................	12.8	8.3	4.2	3.8	3.7	2.2
Other crops...................	10.4	2.9	2.8	1.3	.7	.7
Legume hay and pasture........	17.2	11.8	12.5	13.0	10.4	9.7
Non-legume hay and pasture...	6.6	10.3	9.5	8.0	8.7	7.0
Total hay and pasture[1]...	23.8	22.1	22.0	21.0	19.1	16.7
Net earnings per acre.........	$ 7.98	$11.74	$ 16.12	$ 18.12	$ 22.88	$ 25.31

[1] Includes clover and grass seed crops.

Crop yields. Per-acre yields for corn, oats, wheat and soybeans tended to increase as the land value increased (Figure 2). By using Table 2 and Figure 2, you may find out whether your acreage in various crops, crop yields and per-acre earnings were high or low in comparison with the average of other farms in your area having about the same value of improved land.

FIGURE 2.--RELATIONSHIP BETWEEN CROP YIELDS AND PER ACRE VALUE OF IMPROVED LAND



Source of income. The relative profitableness of various types of farming changes from year to year depending on condition affecting production and price. In 1944 conditions were most favorable for grain farms, so they had the highest rate earned on investment. The dairy farms in this area had the lowest. Feed fed per acre averaged $29.68 on the hog farms, and their returns per $100 worth of feed fed averaged $130.

TABLE 3.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 4, 1944

Item	Source of income				
	Grain 40%+	Dairy sales 40%+	Hogs only 40%+	Hogs and cattle[1]	General farms
Number of farms..........	234	23	74	41	80
Acres in farm............	291	194	217	361	231
Rate earned on investment.	12.5%	8.3%	9.2%	8.8%	8.9%
Feed fed per acre.........	$ 9.99	$ 23.46	$ 29.68	$ 34.14	$ 17.77
Livestock returns					
Per $100 feed fed.......	$134	$154	$130	$122	$137
Hog returns per litter..	225	223	224	239	206
Dairy returns per cow...	149	253	143	125	183
Number of litters.........	9	7	28	27	12
Number of hens............	129	136	136	130	164
Number of cows milked.....	6	18	6	5	8

[1] 40% for one enterprize and 20% for the other.

Size of farm. Rate earned on investment and net earnings per acre did not vary significantly with size of farm for farms above 200 acres. But labor and management earnings increased as the average size of farms increased from 109 acres to 593 acres, because the average rate earned on investment was relatively high (above the 5 percent capitalization rate).

TABLE 4.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 4, 1944

Item	Total acres in farm					
	38 to 120	121 to 200	201 to 280	281 to 360	361 to 440	441 to 1 257
Number of farms.........	35	136	126	75	35	45
Acres in farm...........	109	171	241	321	396	593
Rate earned on investment.................	5.4%	9.5%	11.0%	12.2%	11.3%	11.9%
Labor and management earnings..............	$1 254	$2 703	$3 898	$5 299	$5 555	$8 086
Net earnings per acre..,	10.52	18.09	20.14	21.52	19.85	19.76
Building cost per acre.,	1.83	1.42	1.09	1.00	1.16	.90
Total months of labor...	15.2	17.5	20.1	24.7	27.6	37.1

Labor, horse and machinery costs per crop acre. Increasing amounts of livestock on farms require larger expenditures for labor and for horses and machinery; farmers reduced their labor and horse and machinery costs per crop acre by operating more acres (Table 5).

TABLE 5.--LABOR COST AND HORSE AND MACHINERY COST PER CROP ACRE FOR FARMS OF DIFFERENT SIZE AND DIFFERENT AMOUNTS OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK
Accounting Farms in Farming-Type Area 4, 1944

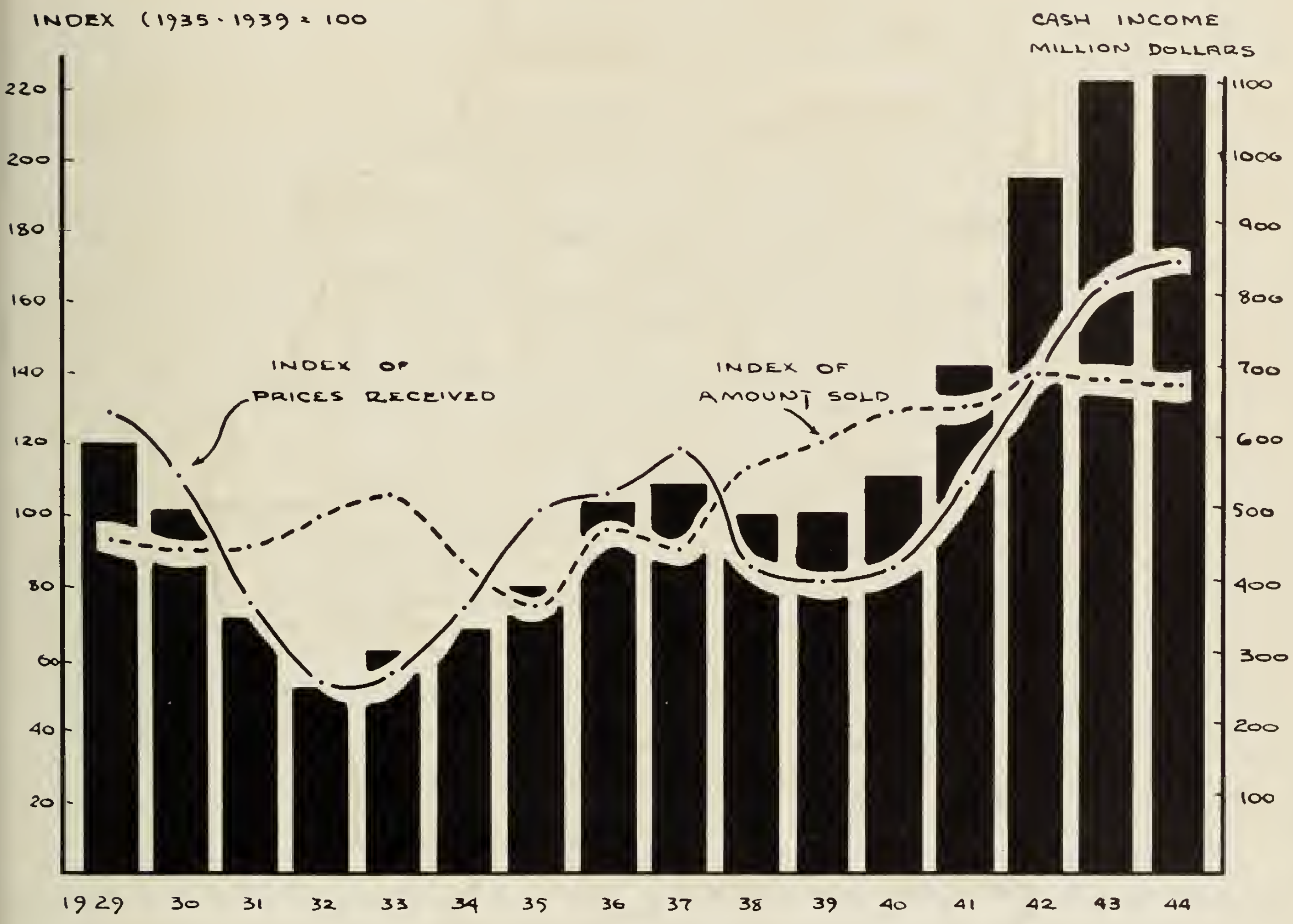
	Feed fed per acre				Feed fed per acre			
Acres per farm	Less than $11.00	$11.00 to $17.99	$18.00 to $24.99	$25.00 or more	Less than $11.00	$11.00 to $17.99	$18.00 to $24.99	$25.00 or more
	(labor cost per crop acre)				(horse and machinery cost per crop acre)			
Less than 121..	$13.05	$16.60	$19.15	$24.30	$9.75	$10.90	$11.10	$12.05
121 to 200.9...	11.55	12.50	14.85	18.05	8.45	9.10	10.00	11.55
201 to 280.9...	10.20	10.75	11.80	14.65	7.40	8.15	8.60	9.90
281 to 360.9...	9.20	10.20	11.60	12.10	7.00	7.75	8.45	9.54
361 to 440.9...	8.80	9.35	10.45	11.65	6.55	7.40	7.65	8.60
441 or more....	7.45	8.80	9.90	11.45	5.70	6.60	7.40	7.70

Earnings by tenure. Farms operated on a crop-share basis, the most common basis in the cash grain area, showed higher earnings to both landlords and tenants than farms operated on a livestock-share basis. The crop-share farms had (1) a larger percentage of tillable land area, and (2) a larger percentage of tillable land in grain (principally corn and soybeans); but less feed fed per acre to productive livestock and lower corn yields per acre (Table 6). In 1944, price relationships were more favorable for grain farming than for livestock farming.

TABLE 6.--OPERATOR'S AND LANDLORD'S EARNINGS BY TENURE
Accounting Farms in Farming-Type Area 4, 1944

	Crop-share farm leases			Livestock-share farm leases	
Item	107 to 200.9 acres	201 to 280.9 acres	281 to 811 acres	85 to 200.9 acres	201 to 526 acres
Number of farms..............	53	43	36	12	12
Acres per farm...............	166	242	380	147	313
Percent of land area tillable.	94.1%	94.2%	93.6%	93.4%	85.7%
Percent of tillable land in grain......................	80.1%	82.8%	81.4%	69.4%	73.8%
Feed fed per acre to prod. L.S.	$ 15.35	$ 13.62	$ 12.59	$ 24.79	$ 27.83
Corn yields per acre, bu......	49.2	51.6	50.0	53.1	57.4
Tenant's share					
Capital invested...........	$ 6 762	$ 8 544	$13 669	$ 6 667	$10 412
Labor and management earnings....................	2 211	2 680	3 994	1 740	2 956
Landlord's share					
Capital invested...........	$25 151	$35 543	$55 651	$24 399	$50 915
Return for capital and mgt..	2 343	3 801	5 776	1 700	4 496
Rate earned on investment...	9.3%	10.7%	10.4%	7.0%	8.8%

YOUR FARM BUSINESS REPORT 1944



CASH INCOME, PRICES, AND AMOUNT SOLD, ILLINOIS, 1929-44

Since 1929, cash income to Illinois farmers and prices received for products sold have followed the same general trends, dropping to a depression low in 1932 and rising to a wartime high in 1944. Amount of products sold has varied far less than prices received but has been on a high level since 1938.

FARMING-TYPE AREA FIVE

West Central General Farming Area

NAME____

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

AE-2316

UNIVERSITY *of* ILLINOIS
COLLEGE *of* AGRICULTURE
AGRICULTURAL EXPERIMENT STATION
URBANA, ILLINOIS

DEPARTMENT *of*
AGRICULTURAL ECONOMICS

June 1, 1945

Dear Cooperator:

This is an analysis of your farm business as shown in the 1944 Farm Account Book which you kept in cooperation with this department. Because we are also short-handed, we have made this report shorter than in past years. We hope you will find it valuable.

The figures for your farm are shown on page 4. Various factors for your farm are compared with figures from similar farms in your area. For example, where size of farm is important in affecting a particular factor, your farm is compared with an average for farms of similar size in your part of the state.

On page 5 various measures of your farm business are shown on a thermometer chart like those used in past years. How favorably your farm compares in different items with other similar farms is shown by the height of the marks on the different columns.

The next three pages are filled with tables and charts showing how the standards used on pages three and four were worked out.

On the inside and outside of the back cover J. B. Cunningham tells how you may use your farm accounts in planning your farm business. As we shift over from wartime farming to peacetime farming within the next two or three years, we will all need to plan carefully. Good records for your business if properly studied will aid you in doing this.

An effort was made to keep this report simple. Additional facts and figures, if needed, may be found in your 1944 farm account book or in the state summary which will appear in an early issue of Illinois Farm Economics.

Over the years we have found farm accounts valuable in helping us to understand what factors make for financial success in farming. Your careful work in keeping the accounts has made this possible.

We thank you for your continued cooperation and hope you will find this report and your account valuable.

Very truly yours,

L. J. NORTON
Acting Head of Department

Annual Farm Business Report

TWO HUNDRED THIRTY-SIX FARMS IN FARMING-TYPE AREA 5, 1944

J. B. Cunningham and Elmer N. Searls[1]

Net farm earnings in Farming-Type Area 5 were lower in 1944 than for any other year since 1941. Two hundred thirty-six farms from this general farming area averaged $3,656 for labor and management in 1944, whereas such earnings for 1943 averaged $4,550, the wartime high.

From the tables in this report, each cooperator may determine why his return for 1944 was above or below the average of other farms in the area. Whenever the factor is affected by size, source of income, value of improved land, amount of feed fed, and tenure, the records are sorted into groups and averages are run for each group. This practice permits you to compare your farm with others that are more similar to yours than is the entire group.

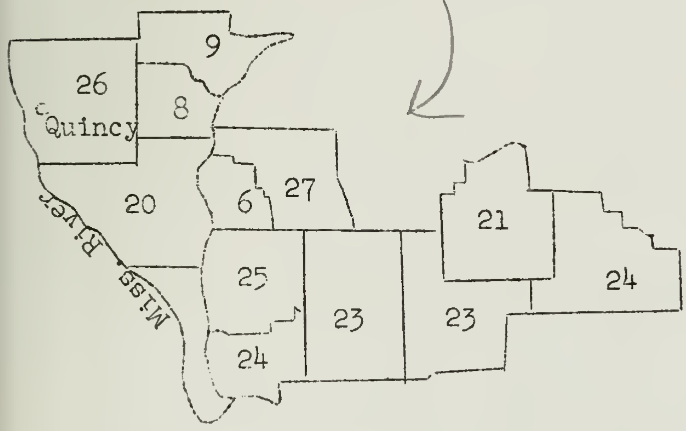
Yields of corn, oats and soybeans are directly related to the quality of land; hence the average yield for these crops on farms having the same value of improved land as yours is taken as standard for your farm. This relationship is shown in Figure 2.

The returns per $100 worth of feed fed, amount of feed fed, hog returns per litter, and dairy returns per cow milked are affected by the kind and amount of livestock. If you received over 40 percent of your 1944 income from hogs, the standard return per $100 worth of feed fed for your farm is $134, the average of 122 farms with 40 percent or more of their income from hogs (Table 3).

If you operated a 160-acre farm and fed $15 worth of feed per acre in 1944, your labor cost per crop acre should have been below $14.84 in order to indicate more efficient use of labor than the average of similar farms (Table 5).

Comparisons between farms of different sizes and those with different types of tenure are shown in Tables 4 and 6, respectively.

The number of records from the different counties included in this report are shown in Figure 1.



Farm advisers who assisted with this project were:

Adams, G. B. Whitman (S. E. Myers since March 1, 1944); Brown, E. H. Garlich; Christian, C. S. Love; Greene, Ray H. Roll; Jersey, C. T. Kibler; Macoupin, O. O. Mowery; Montgomery, Alden E. Snyder; Morgan, W. F. Coolidge; Pike, W. B. Burn; Schuyler, Roy K. Wise; Scott, G. H. Reid; Shelby, W. S. Batson.

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[1] O. B. Brown supervised the closing of the accounts and the preparation of the tables used in this report.

TABLE 1.--FACTORS USED TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 5, 1944

Item	Your farm	Average of similar farms
Factors used on efficiency charts, opposite page		
Rate earned on investment	________%	12.5 %a/
Factors that affect the gross income		
Crop yields		
Corn, bu	________	________b/
Oats, bu	________	________
Wheat, bu	________	21.3 a/
Soybeans, bu	________	________b/
Livestock factors		
Returns per $100 worth of feed fed	$________	$________d/
Hog returns per litter farrowed (No. litters_____)	________	________
Dairy returns per cow milked (No. cows_____)	________	________
Poultry returns per hen (No. hens_____)	________	3.63 a/
Factors that affect expenses		
Labor cost per crop acre	$________	$________e/
Horse and machinery cost per crop acre	________	________
Land improvement cost per acre	________	.82 a/
Building cost per acre	________	________c/
Organization of farm		
Acres in farm	________	263 a/
Percent of tillable land in hay and pasture	________%	________%b/
Feed fed per acre to productive livestock	$________	$________d/
Other factors not used on efficiency chart		
Cash balance	$________	$5 707 a/
Total inventory change	________	-273
Net earnings per acre	________	________b/
Labor and management earnings	________	________c/
Value of land per acre	________	70 a/
Percent of land area tillable	________%	________%b/
Number of pigs weaned per litter	________	6.4 a/
Total months of labor (months hired_____)	________	________c/
Tenant's and landlord's earnings on completely rented farms		
Tenant's labor and management earnings	$________	$________f/
Landlord's returns for capital and management	________	________

a/ Average of all 236 accounting farms.
b/ Average of farms with similar value for improved land, Table 2 or Figure 2.
c/ Average of farms of similar size, Table 4.
d/ Average of farms with similar source of income, Table 3.
e/ Average of farms of similar size and with similar amount of feed fed, Table 5.
f/ Average of farms of similar lease and size, Table 6.

USE THIS CHART TO STUDY YOUR BUSINESS
Accounting Farms in Farming-Type Area 5, 1944

The double line across the middle of the page represents the average for farms which are similar to your farm for the indicated factor. By drawing a line across each column at the place where your farm stands in that factor, you can compare your efficiency with that of other similar accounting farms in your area.

	Factors that affect gross earnings								Factors that affect expenses				Organization of farm		
	Crop yields				Livestock										
Rate earned on investment, percent	Corn, bu.	Oats, bu.	Wheat, bu.	Soybeans, bu.	Returns per $100 feed fed	Hog returns per litter farrowed	Dairy returns per cow milked	Poultry returns per hen	Labor cost per crop acre	Horse and machinery cost per crop acre	Land improvement cost per acre	Building cost per acre	Acres in farm	Percent of tillable land in hay and pas.	Feed fed per acre to prod. livestock
32.5			31.3					6.13			--		413		
28.5			29.3					5.63			.02		383		
24.5			27.3					5.13			.22		353		
20 5			25.3					4.63			.42		323		
16.5			23.3					4.13			.62		293		
12.5			21.3					3.63			.82		263		
8.5			19.3					3.13			1.02		233		
4.5			17.3					2.63			1.22		203		
.5			15.3					2.13			1.42		173		
-3.5			13.3					1.63			1.62		143		
-7.5			11.3					1.13			1.82		113		
* 4%	4 bu.	4 bu.	2 bu.	2 bu.	$20	$20	$10	.50	$1	$1	.20	.20	30	5%	$4

*Represents the value of each space between lines.

(Higher values are recorded above the center of the page and lower values below, except for expenses, which are recorded in the opposite direction.)

Value of improved land. Net earnings increased by amounts which varied from 42 cents to $9.33 an acre for $20 increases in the value of improved land except for one group (Table 2). Larger earnings on the higher valued land were associated with more tillable land in corn and soybeans and with higher yields.

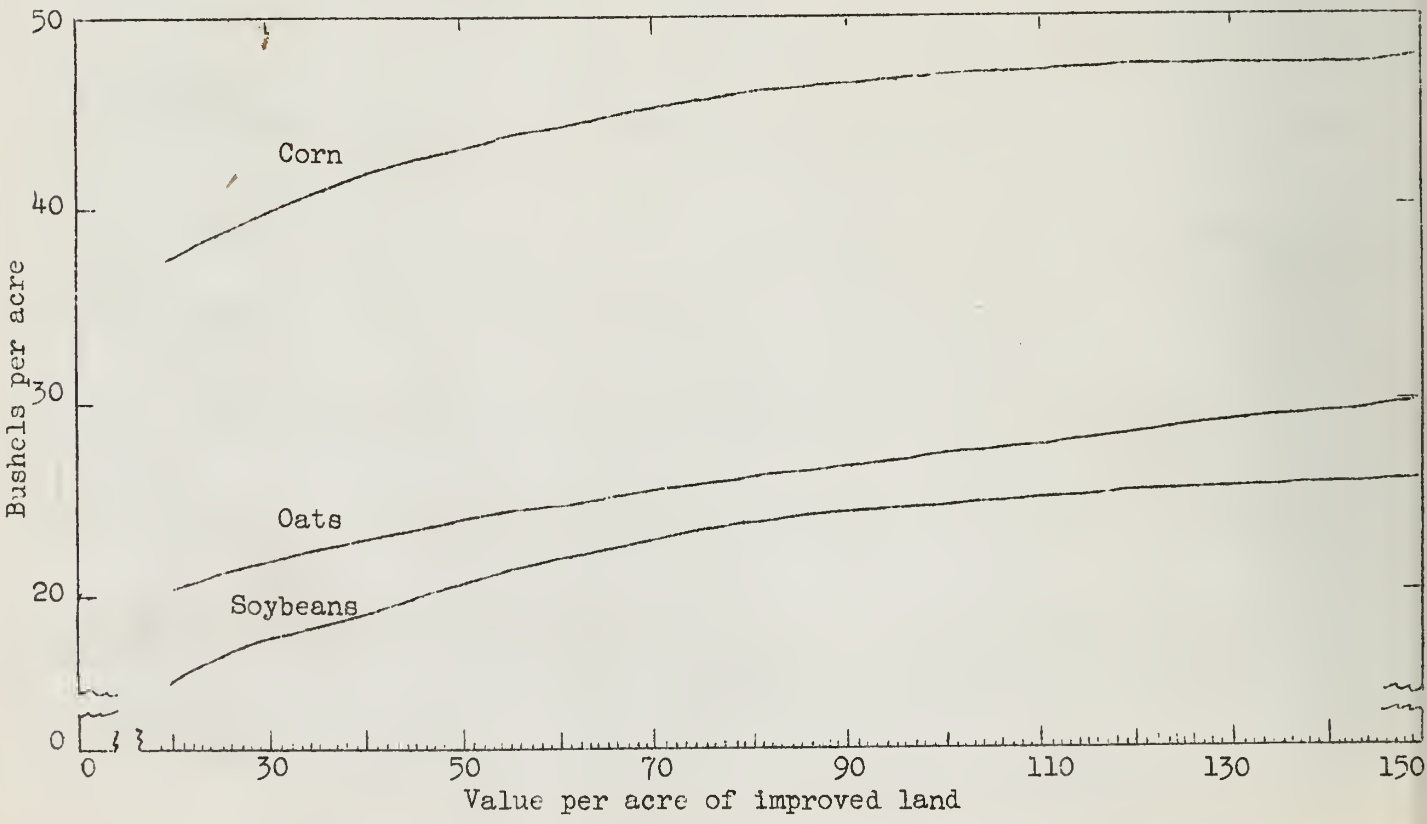
TABLE 2.--USE OF TILLABLE LAND AND OTHER FACTORS RELATED TO THE VALUE OF IMPROVED LAND, Accounting Farms in Farming-Type Area 5, 1944

Item	Value of improved land					
	$23 to $42.99	$43 to $62.99	$63 to $82.99	$83 to $102.99	$103 to $122.99	$123 to $200
Number of farms................	26	65	61	49	13	22
Average value of improved land	$36	$55	$74	$95	$113	$133
Percent of land area tillable.	63.3	73.8	77.4	82.9	85.0	91.1
Percent of tillable land in:						
Corn.........................	32.6	29.8	33.3	35.8	35.5	41.9
Oats.........................	6.4	8.0	8.5	8.0	8.5	7.0
Wheat........................	6.6	8.6	10.0	7.7	6.9	5.7
Soybeans.....................	11.5	15.1	17.2	22.2	22.6	30.4
Other crops..................	6.9	4.0	2.5	1.8	..8	.7
Legume hay and pasture......	19.7	19.2	15.3	12.8	15.9	9.0
Non-legume hay and pasture..	16.3	15.3	13.2	11.7	9.8	5.3
Total hay and pasture[1]...	36.0	34.5	28.5	24.5	25.7	14.3
Net earnings per acre.........	$10.65	$11.07	$15.90	$19.75	$ 16.61	$ 25.94

[1] Includes clover and grass seed crops.

Crop yields. Corn, oats, and soybean yields were related to value of improved land (Figure 2). As the value of improved land increased from $30 to $90 an acre, the corn yield increased about seven bushels an acre whereas the yield on $150 land was only one bushel more than on the $90 an acre land.

FIGURE 2.--RELATIONSHIP BETWEEN CROP YIELDS AND VALUE OF IMPROVED LAND,/acre (Area 5)



Source of income. The 41 farmers with over 40 percent of their income from grain had a 31 percent greater return for every dollar invested than the 122 farmers with over 40 percent of their income from hogs but had slightly lower returns than the 30 dairy farmers (Table 3). The hog farmers fed the most feed per acre and had higher earnings per dollar invested than the 43 general farms but had a $45 smaller return per $100 feed fed than the 30 dairy farms.

TABLE 3.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 5, 1944

Item	Source of income			
	Grains 40%+	Dairy sales 40%+	Hogs 40% +	General farms
Number of farms..........	41	30	122	43
Acres in farm............	308	248	256	252
Rate earned on investment.	14.1%	14.8%	11.8%	10.8%
Feed fed per acre.........	$ 12.56	$ 20.20	$ 24.86	$ 21.06
Livestock returns				
Per $100 feed fed.......	$125	$179	$134	$130
Hog returns per litter..	217	198	223	186
Dairy returns per cow...	169	268	158	191
Number of litters.........	14	11	26	12
Number of hens............	142	163	128	163
Number of cows milked.....	6	22	7	10

Size of farm. The 67 farmers in the 201- to 280.9-acre group used 8.4 months more labor than the 10 farmers with less than 121 acres and received $1,508 more for their labor and management; their farms were also over twice as large (Table 4).

TABLE 4.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 5, 1944

Item	Total acres in farm					
	Less than 121	121 to 200.9	201 to 280.9	281 to 360.9	361 to 440.9	441 or more
Number of farms..........	10	82	67	34	24	19
Acres in farm............	114	168	240	320	402	559
Rate earned on investment	9.8%	9.7%	13.1%	13.1%	11.6%	15.7%
Labor and management earnings...............	$2 002	$2 150	$3 510	$4 475	$4 560	$8 939
Net earnings per acre....	15.08	12.73	15.90	16.82	15.21	20.44
Building cost per acre...	1.38	1.29	1.05	1.01	1.09	.96
Total months of labor....	14.7	17.7	23.1	25.3	28.8	35.2

Labor, horse and machinery costs per crop acre. Increasing amounts of livestock on farms require larger expenses for labor and for horses and machinery; farmers reduced their labor and horse and machinery costs per crop acre by operating more acres (Table 5).

TABLE 5.--LABOR COST AND HORSE AND MACHINERY COST PER CROP ACRE FOR FARMS OF DIFFERENT SIZE AND DIFFERENT AMOUNTS OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK, Accounting Farms in Farming-Type Area 5, 1944

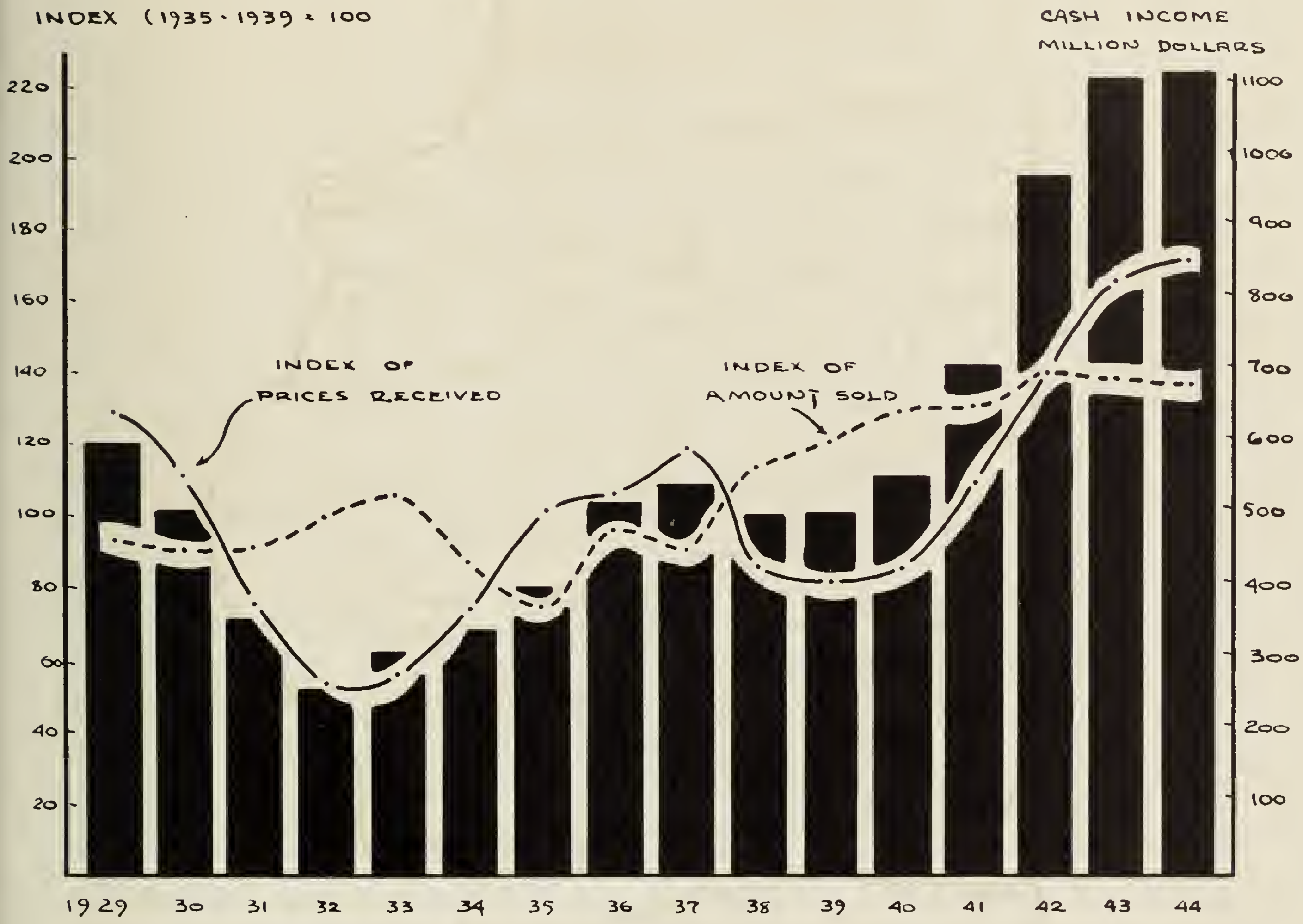
Acres per farm	Feed fed per acre				Feed fed per acre			
	Less than $12.00	$12.00 to $21.99	$22.00 to $31.99	$32.00 or more	Less than $12.00	$12.00 to $21.99	$22.00 to $31.99	$32.00 or more
	(labor cost per crop acre)				(horse and machinery cost per crop acre)			
Less than 121...	$17.73	$18.54	$18.79	$20.20	$9.42	$9.66	$10.39	$12.55
121 to 200.9....	13.85	14.84	16.43	18.52	8.64	9.29	10.05	11.56
201 to 280.9....	10.74	13.86	14.72	17.76	8.10	9.18	9.78	11.08
281 to 360.9....	9.80	12.54	12.88	13.68	7.81	8.91	9.18	10.45
361 to 440.9....	9.38	11.40	12.54	13.13	7.46	8.52	8.77	9.83
441 or more.....	8.91	10.29	11.75	12.39	6.24	6.75	7.66	8.81

Earnings by different leases. Tenants with a crop-share cash lease, the most common type in the area, had more invested and received from $700 to $2,000 more for their work than tenants with a livestock-share lease on similar sized farms (Table 6). The fact that livestock-feed price relationships were not in favor of the livestock feeder in 1944 partially explains this difference in earnings.

TABLE 6.--TENANTS AND LANDLORD'S EARNINGS ON RENTED FARMS Accounting Farms in Farming-Type Area 5, 1944

Item	Total acres in farm	
	Less than 241	241 or more
Livestock-share farm lease		
Number of farms..............................	7	10
Acres in farm................................	182	332
Tenant's share		
Capital invested............................	$ 6 110	$ 8 534
Tenant's labor and management earnings.......	1 609	1 314
Landlord's share		
Capital invested............................	$17 526	$32 027
Landlord's return for capital and management.	1 708	3 297
Rate earned on investment..................	9.7%	10.3%
Crop-share cash farm lease		
Number of farms..............................	22	18
Acres in farm................................	186	348
Tenant's share		
Capital invested............................	$ 7 228	$13 801
Tenant's labor and management earnings.......	2 368	3 398
Landlord's share		
Capital invested............................	$17 138	$38 150
Landlord's return for capital and management.	1 898	4 060
Rate earned on investment..................	11.1%	10.6%

YOUR FARM BUSINESS REPORT 1944



CASH INCOME, PRICES, AND AMOUNT SOLD, ILLINOIS, 1929-44

Since 1929, cash income to Illinois farmers and prices received for products sold have followed the same general trends, dropping to a depression low in 1932 and rising to a wartime high in 1944. Amount of products sold has varied far less than prices received but has been on a high level since 1938.

FARMING-TYPE AREA SIX

St. Louis Dairy and Wheat Area

NAME____

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

AE-2317

UNIVERSITY *of* ILLINOIS
COLLEGE *of* AGRICULTURE
AGRICULTURAL EXPERIMENT STATION
URBANA, ILLINOIS

DEPARTMENT *of*
AGRICULTURAL ECONOMICS

June 1, 1945

Dear Cooperator:

This is an analysis of your farm business as shown in the 1944 Farm Account Book which you kept in cooperation with this department. Because we are also short-handed, we have made this report shorter than in past years. We hope you will find it valuable.

The figures for your farm are shown on page ~~4~~ 2. Various factors for your farm are compared with figures from similar farms in your area. For example, where size of farm is important in affecting a particular factor, your farm is compared with an average for farms of similar size in your part of the state.

On page 5 various measures of your farm business are shown on a thermometer chart like those used in past years. How favorably your farm compares in different items with other similar farms is shown by the height of the marks on the different columns.

The next three pages are filled with tables and charts showing how the standards used on pages three and four were worked out.

On the inside and outside of the back cover J. B. Cunningham tells how you may use your farm accounts in planning your farm business. As we shift over from wartime farming to peacetime farming within the next two or three years, we will all need to plan carefully. Good records for your business if properly studied will aid you in doing this.

An effort was made to keep this report simple. Additional facts and figures, if needed, may be found in your 1944 farm account book or in the state summary which will appear in an early issue of Illinois Farm Economics.

Over the years we have found farm accounts valuable in helping us to understand what factors make for financial success in farming. Your careful work in keeping the accounts has made this possible.

We thank you for your continued cooperation and hope you will find this report and your account valuable.

Very truly yours,

L. J. NORTON
Acting Head of Department

Annual Farm Business Report

TWO HUNDRED SEVENTY-EIGHT FARM RECORDS IN FARMING-TYPE AREA 6, 1944

J. B. Cunningham, Elmer Searls, E. L. Sauer[1]

This report is a summary of the 1944 farm records kept by 278 farmers in cooperation with the University of Illinois and local county farm advisers in the nine counties of Farming-Type Area 6, where dairy and wheat and poultry enterprises are important. Number of records in each county and location of counties in the area are shown at the bottom of this page.

In Table 1 earnings, crop yields, livestock returns, expenses and a number of other figures for your farm are compared with averages for similar farms. Some of these are compared graphically on the page opposite Table 1.

Certain factors, like rate earned on investment, result from the combination of many things; in such cases your farm figures are compared with the average of all farms. But crop yields are directly related to soil productivity, of which value of improved land is our measure. Therefore the corn, oat and wheat yields on your farm are compared with yields in the group of farms having improved land nearest the value of yours. The standard for crop yields on your farm is obtained from Figure 2 by running a vertical line from the point on the base that equals the value of your improved land. Where this line intersects the line showing yields is the standard for your farm.

Returns per $100 feed fed are primarily affected by the class of livestock involved. If you received most of your income from dairy sales, the standard set for your farm on returns per $100 worth of feed fed would be taken from the average of similar farms where 40 percent or more of the income was from dairy sales (Table 3). This factor averaged $167 in your area.

Other factors in Table 1 and on the thermometer charts on the opposite page are based on averages for similar farms shown in Tables 4, 5, and 6. The tables used for each comparison are shown in the footnote.

Farm advisers who assisted with this project in the various counties are:

Bond, W. H. Tammeus (H. H. Kuhnen since September 15, 1944); Clinton, C. E. Twigg; Effingham, C. S. Cutright; Fayette, J. B. Turner; Madison, T. W. May; Monroe, E. S. Amrine; Randolph, E. C. Secor (C. F. Mees since August 1, 1944); St. Clair, B. W. Tillman; Washington, A. B. Rowand.

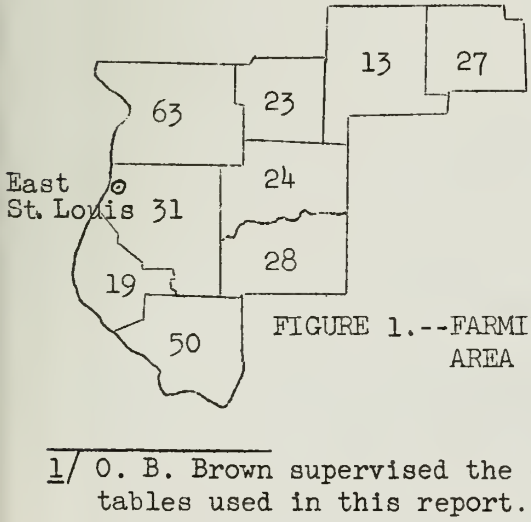


FIGURE 1.--FARMING-TYPE AREA 6

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[1] O. B. Brown supervised the closing of the accounts and the preparation of the tables used in this report.

TABLE 1.--FACTORS USED TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 6, 1944

Item	Your farm	Average of similar farms
Factors used on efficiency chart, opposite page		
Rate earned on investment	%	11.2 % a/
Factors that affect the gross income		
Crop yields		
Corn, bu		b/
Oats, bu		
Wheat, bu		
Soybeans, bu		18.9 a/
Livestock factors		
Returns per $100 worth of feed fed	$	$ d/
Hog returns per litter farrowed (No. litters_____)		
Dairy returns per cow milked (No. cows_____)		
Poultry returns per hen (No. hens_____)		3.86 a/
Factors that affect expenses		
Labor cost per crop acre	$	$ e/
Machinery and horse cost per crop acre		
Land improvement cost per acre		.99 a/
Building cost per acre		c/
Organization of farm		
Acres in farm		226 a/
Percent of tillable land in hay and pasture		b/
Feed fed per acre to productive livestock	$	$ d/
Other factors not used on efficiency chart		
Cash balance	$	$3147 a/
Change in inventory		456
Net earnings per acre		b/
Labor and management earnings		c/
Value of land per acre		46 a/
Percent of land area tillable		b/
Number of pigs weaned per litter		6.9 a/
Total months of labor (months hired_____)		c/
Tenant's and landlord's earnings on completely rented farms		
Tenant's labor and management earnings	$	$ f/
Landlord's returns for capital and management		

a/ Average of all 278 accounting farms.
b/ Average of farms with similar value for improved land, Table 2 or Figure 1.
c/ Average of farms of similar size, Table 4.
d/ Average of farms with similar source of income, Table 3.
e/ Average of farms of similar size and with similar amount of feed fed, Table 5.
f/ Average of farms of similar size with similar leases, Table 6.

USE THIS CHART TO STUDY YOUR BUSINESS
Accounting Farms in Farming-Type Area 6, 1944

The double line across the middle of the page represents the average for farms which are similar to your farm for the indicated factor. By drawing a line across each column at the place where your farm stands in that factor, you can compare your efficiency with that of other similar accounting farms in your area.

	Factors that affect gross earnings								Factors that affect expenses				Organization of farm		
	Crop yields				Livestock										
Rate earned on investment, percent	Corn, bu.	Oats, bu.	Wheat, bu.	Soybeans, bu.	Returns per $100 feed fed	Hog returns per litter farrowed	Dairy returns per cow milked	Poultry returns per hen	Labor cost per crop acre	Machinery and horse cost per crop acre	Land improvement cost per acre	Building cost per acre	Acres in farm	Percent of tillable land in hay and pas.	Feed fed per acre to prod. livestock
31.2				29				6.36			--		376		
27.2				27				5.87			.19		346		
23.2				25				5.36			.39		316		
19.2				23				4.87			.59		286		
15.2				21				4.36			.79		256		
11.2				19				3.86			.99		226		
7.2				17				3.36			1.19		196		
3.2				15				2.86			1.39		166		
-.8				13				2.36			1.59		136		
-4.8				11				1.86			1.79		106		
-8.8				9				1.36			1.99		76		
* 4%	4 bu.	4 bu.	4 bu.	2 bu.	$15	$20	$20	$.50	$2	$1	$.20	$.30	30	5%	$4

*Each space between lines represents the amount indicated at bottom of each column.

(Higher values are recorded above the center of the page and lower values below, except for expenses, which are recorded in the opposite direction.)

Value of improved land. Earnings per acre were directly related to value of improved land (Table 2). A higher percentage of tillable land in corn and wheat and higher crop yields on the higher valued farms partly explain this relationship.

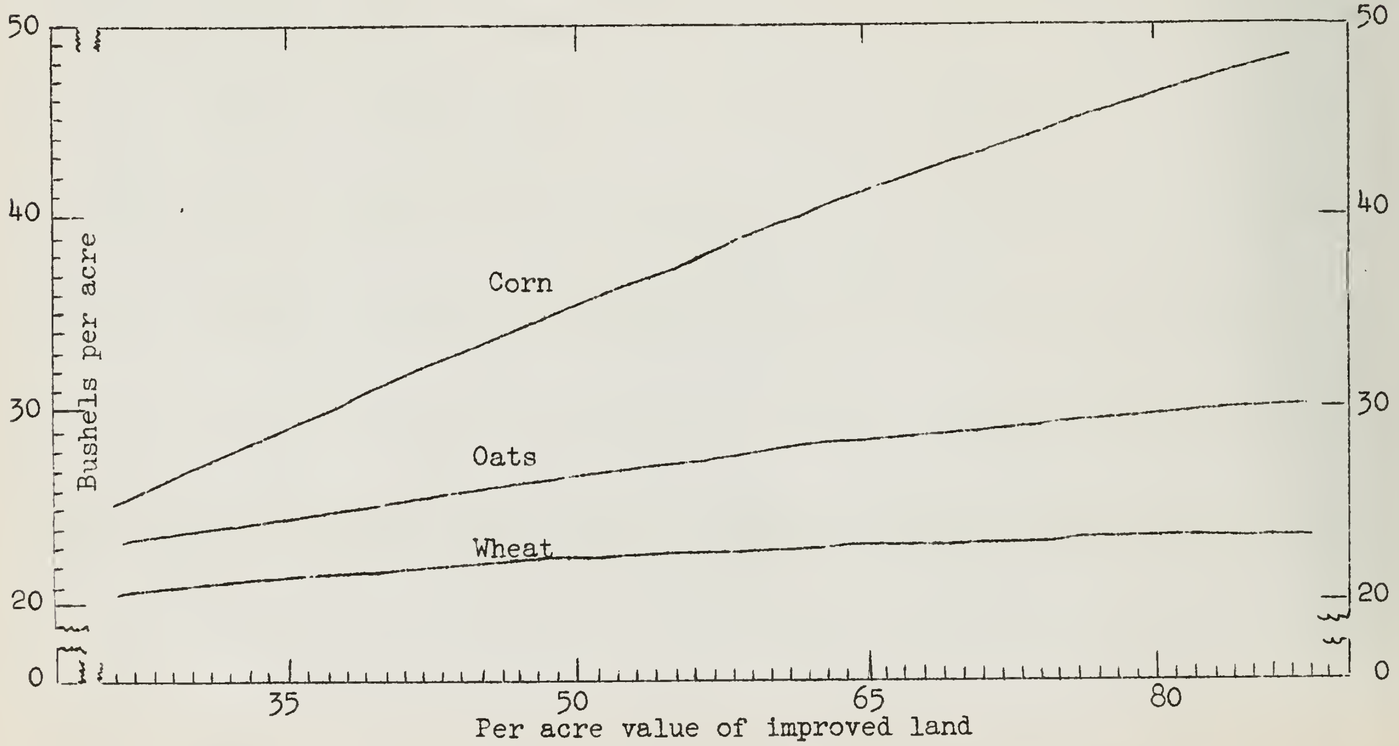
TABLE 2.--USE OF TILLABLE LAND AND OTHER FACTORS RELATED TO THE VALUE OF IMPROVED LAND
Accounting Farms in Farming-Type Area 6, 1944

	Value of improved land				
	Less than $35	$35 to $49.99	$50 to $64.99	$65 to $79.99	$80 and over
Number of farms	52	78	86	34	28
Average value of improved land	$29	$41	$55	$72	$88
Percent of land area tillable	76.7	83.4	83.1	80.3	87.9
Percent of tillable land in:					
Corn	19.7	20.0	23.7	25.3	30.5
Oats	9.2	10.0	9.6	10.7	6.6
Wheat	14.6	20.0	23.7	26.6	23.0
Soybeans	10.0	11.1	8.0	6.6	6.6
Other crops	10.2	5.2	5.9	3.8	10.2
Legume hay and pasture	21.3	22.3	19.1	17.0	14.0
Non-legume hay and pasture	15.0	11.4	10.0	10.0	9.1
Total hay and pasture[1]	36.3	33.7	29.1	27.0	23.1
Net earnings per acre	$ 5.07	$ 9.40	$12.38	$13.78	$14.46

[1] Includes clover and grass seed crops.

Crop yields. Corn yield increased 1 bushel per acre for every $2\frac{1}{2}$ dollar increase in land value. The effect of value of land on oats yields was appreciably less than on corn yields and even less for wheat.

FIGURE 2.--RELATIONSHIP BETWEEN CROP YIELDS AND VALUE OF IMPROVED LAND (Area 6)



Source of income. Dairy cows made a larger return per $100 worth of feed fed in 1944 than any other single productive livestock enterprise or combination of enterprises (Table 3). This was because the dairy-feed returns ratio was the most favorable.

Because of larger acreages and high grain prices, farms with a small amount of livestock made somewhat larger returns on money invested than dairy or other livestock farms.

TABLE 3.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 6, 1944

	Source of income				
		Dairy		General farms	
Item	Grain 40%+	sales 40%+	Hogs 40%+	L.S 60%-	L.S. 60%+
Number of farms	33	108	39	28	70
Acres in farm	277	207	238	249	216
Rate earned on investment	12.6%	11.7%	11.2%	12.8%	8.6%
Feed fed per acre	$ 7.26	$ 18.67	$ 20.74	$ 11.30	$ 15.42
Livestock returns					
Per $100 feed fed	$131	$167	$133	$141	$140
Hog returns per litter	178	222	222	176	221
Dairy returns per cow	113	256	155	167	164
Number of litters	6	6	17	8	7
Number of hens	177	196	203	202	216
Number of cows milked	7	16	7	9	10

Size of farm. Labor and management earnings were directly related to size of farm up to 360 acres. The 201- to 281-acre farms, which averaged 237 acres in size, used 7.1 months more labor than the farms under 121 acres (average 98 acres) but had labor and management earnings that averaged $887 larger. They also earned 2.4 percent more on invested capital.

TABLE 4.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 6, 1944

	Total acres in farm				
Item	Less than 121	121 to 200.9	201 to 280.9	281 to 360.9	361 or more
Number of farms	29	106	81	40	22
Acres in farm	98	166	237	319	477
Rate earned on investment	8.0%	11.0%	10.4%	14.6%	9.9%
Labor and management earnings	$1379	$2150	$2266	$3514	$2590
Net earnings per acre	9.89	11.79	9.69	11.74	6.60
Building cost per acre	1.59	1.31	.98	.74	.64
Total months of labor	17.8	20.5	24.9	26.6	28.9

Labor and machinery costs per crop acre. As the size of farm increases, the labor cost per crop acre decreases; but as the amount of feed fed increases, labor cost also increases (Table 5). Horse and machinery cost per crop acre is related to size of farm and feed fed in the same manner as is labor cost.

TABLE 5.--LABOR COST AND HORSE AND MACHINERY COST PER CROP ACRE FOR FARMS OF DIFFERENT SIZE AND WITH DIFFERENT AMOUNTS OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK
Accounting Farms in Farming-Type Area 6, 1944

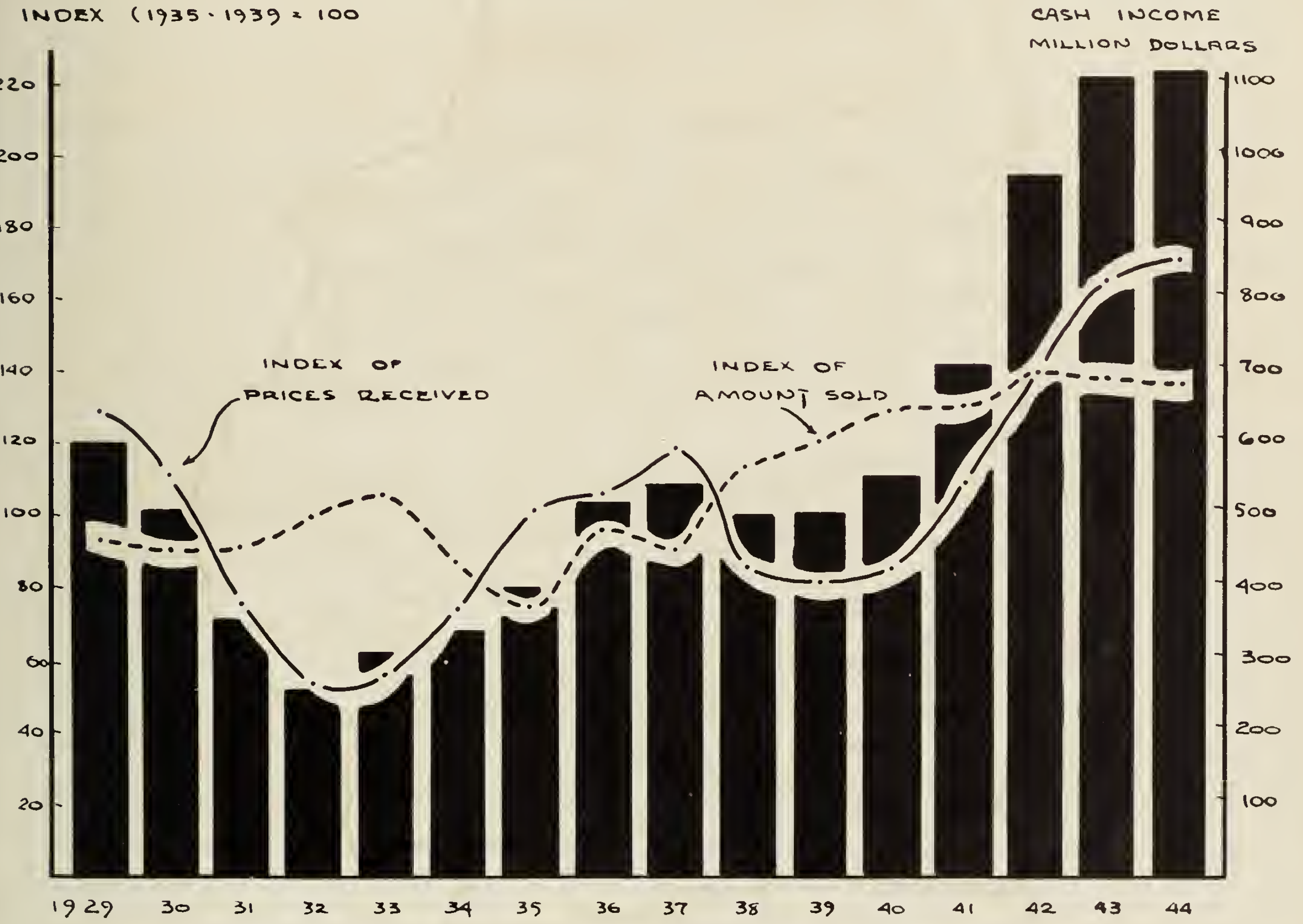
	Feed fed per acre				Feed fed per acre			
Acres per farm	Less than $9.00	$9.00 to $14.99	$15.00 to $20.99	$21.00 or more	Less than $9.00	$9.00 to $14.99	$15.00 to $20.99	$21.00 or more
	(labor cost per crop acre)				(horse and machinery cost per crop acre)			
Less than 121	$15.30	$17.19	$18.54	$23.83	$8.88	$9.59	$12.17	$14.40
121 to 200	13.56	14.42	17.01	20.11	7.68	8.85	10.24	13.22
201 to 280	11.52	13.99	14.50	15.01	7.12	8.28	9.47	11.62
281 to 360	10.93	11.95	12.40	14.29	6.96	8.20	8.88	11.27
More than 360	10.18	11.50	11.65	12.72	6.66	7.77	8.05	9.06

Earnings by tenure. The only common type of rented farms in the area was the crop-share-cash farm. Both landlords and operators had larger earnings on farms over 180 acres than on those that were smaller. The difference in rate earned by the land owners was only 0.6 percent between the two groups.

TABLE 6.--TENANTS AND LANDLORD'S EARNINGS ON RENTED FARMS
Accounting Farms in Farming-Type Area 6, 1944

	Total acres in farm	
Item	Less than 181	181 or more
Crop-share cash farm lease		
Number of farms	22	22
Acres in farm	135	269
Tenant's share		
Capital invested	$5661	$ 8148
Tenant's labor and management earnings	1665	2498
Landlord's share		
Capital invested	$8910	$14990
Landlord's return for capital and management	773	1395
Rate earned on investment	8.7%	9.3%

YOUR FARM BUSINESS REPORT 1944



CASH INCOME, PRICES, AND AMOUNT SOLD, ILLINOIS, 1929-44

Since 1929, cash income to Illinois farmers and prices received for products sold have followed the same general trends, dropping to a depression low in 1932 and rising to a wartime high in 1944. Amount of products sold has varied far less than prices received but has been on a high level since 1938.

FARMING-TYPE AREA SEVEN

South Central Mixed Farming Area

NAME____

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

AE-2318

UNIVERSITY *of* ILLINOIS
COLLEGE *of* AGRICULTURE
AGRICULTURAL EXPERIMENT STATION
URBANA, ILLINOIS

DEPARTMENT *of*
AGRICULTURAL ECONOMICS

June 1, 1945

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Over the years we have found farm accounts valuable in helping us to understand what factors make for financial success in farming. Your careful work in keeping the accounts has made this possible.

We thank you for your continued cooperation and hope you will find this report and your account valuable.

Very truly yours,

L. J. NORTON
Acting Head of Department

Annual Farm Business Report

ONE HUNDRED TWENTY-TWO FARMS IN FARMING-TYPE AREA 7, 1944

J. B. Cunningham, Elmer Searls, J. E. Wills[1]

Net farm earnings in Farming-Type Area 7 were lower in 1944 than for any other year since 1941. One hundred twenty-two farms from this mixed farming area averaged $1,610 for operator's labor and management in 1944, whereas those for 1943 averaged $2,088, the wartime high.

From the tables in this report, each cooperator may determine why his return for 1944 was above or below the average of other farms in the area. Whenever the factor is affected by size, source of income, value of improved land, amount of feed fed, and tenure, the records are sorted into groups and averages are run for each group. This practice permits you to compare your farm with others that are more similar to yours than is the entire group.

Yields of corn, wheat and soybeans are directly related to the quality of land; hence the average yield for these crops on farms having the same value of improved land as yours is taken as standard for your farm. This relationship is shown in Figure 2.

The returns per $100 worth of feed fed, amount of feed fed, hog returns per litter, and dairy returns per cow milked are affected by the kind and amount of livestock. If you received over 40 percent of your 1944 income from hogs, the standard return per $100 worth of feed fed for your farm is $122, the average of 29 farms with 40 percent or more of their income from hogs (Table 3).

If you operated a 160-acre farm and fed $15 worth of feed per acre in 1944, your labor cost per crop acre should have been below $11.42 in order to indicate more efficient use of labor than the average of similar farms (Table 5).

Comparisons between farms of different sizes and those with different types of tenure are shown in Tables 4 and 6, respectively.

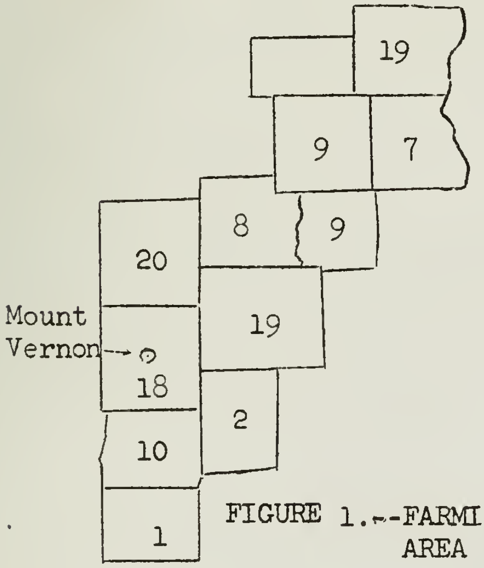

FIGURE 1.--FARMING-TYPE AREA 7

The numbers of records from the different counties included in this report are shown in Figure 1.

Farm advisers who assisted with this project in 1944 were: Clark, Theo. E. Myers; Clay, Edgar Booker; Crawford, Halsey L. Miles; Franklin, W. C. Anderson (G. S. Christenson since October 9, 1944); Hamilton, W. C. Anderson (Glen F. Sons since December 1, 1944); Jasper, R. E. Apple; Jefferson, Donald O. Lee; Marion, F. J. Blackburn; Richland, E. J. Barnes; Wayne, L. B. Kimmel; Williamson, L. B. Broom (E. E. Greer since September 1, 1944).

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[1] O. B. Brown supervised the closing of the accounts and the preparation of the tables used in this report. F. A. Stewart was fieldman in Marion, Jefferson, and Wayne Counties.

TABLE 1.--FACTORS USED TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 7, 1944

Item	Your farm	Average of similar farms
Factors used on efficiency charts, opposite page		
Rate earned on investment	%	8.1 % a/
Factors that affect the gross income		
Crop yields		
Corn, bu		b/
Oats, bu		19.4 a/
Wheat, bu		b/
Soybeans, bu		
Livestock factors		
Returns per $100 worth of feed fed	$	$ d/
Hog returns per litter farrowed (No. litters_____)		
Dairy returns per cow milked (No. cows_____)		
Poultry returns per hen (No. hens_____)		3.79 a/
Factors that affect expenses		
Labor cost per crop acre	$	$ e/
Horse and machinery cost per crop acre		1.18
Land improvement cost per acre		1.18 a/
Building cost per acre		c/
Organization of farm		
Acres in farm		297.1 a/
Percent of tillable land in hay and pasture	%	% b/
Feed fed per acre to productive livestock	$	$ d/
Other factors not used on efficiency chart		
Cash balance	$	$2740 a/
Total inventory change		-191
Net earnings per acre		b/
Labor and management earnings		c/
Value of land per acre		33 a/
Percent of land area tillable	%	% b/
Number of pigs weaned per litter		6.6 a/
Total months of labor (months hired_____)		c/
Tenant's and landlord's earnings on completely rented farms		
Tenant's labor and management earnings	$	$ f/
Landlord's returns for capital and management		

a/ Average of all 122 accounting farms.
b/ Average of farms with similar value for improved land, Table 2 or Figure 2.
c/ Average of farms of similar size, Table 4.
d/ Average of farms with similar source of income, Table 3.
e/ Average of farms of similar size and with similar amount of feed fed, Table 5.
f/ Average of farms of similar tenure and size, Table 6.

USE THIS CHART TO STUDY YOUR BUSINESS
Accounting Farms in Farming-Type Area 7, 1944

The double line across the middle of the page represents the average for farms which are similar to your farm for the indicated factor. By drawing a line across each column at the place where your farm stands in that factor, you can compare your efficiency with that of other similar accounting farms in your area.

	Factors that affect gross earnings								Factors that affect expenses				Organization of farm		
	Crop yields				Livestock										
Rate earned on investment, percent	Corn, bu.	Oats, bu.	Wheat, bu.	Soybeans, bu.	Returns per $100 feed fed	Hog returns per litter farrowed	Dairy returns per cow milked	Poultry returns per hen	Labor cost per crop acre	Machinery and horse cost per crop acre	Land improvement cost per acre	Building cost per acre	Acres in farm	Percent of tillable land in hay and pas.	Feed fed per acre to prod. livestock
23.1		34.4						6.29			.18		547		
20.1		31.4						5.79			.38		497		
17.1		28.4						5.29			.58		447		
14.1		25.4						4.79			.78		397		
11.1		22.4						4.29			.98		347		
8.1		19.4						3.79			1.18		297		
5.1		16.4						3.29			1.38		247		
2.1		13.4						2.79			1.58		197		
-.9		10.4						2.29			1.78		147		
-3.9		7.4						1.79			1.98		97		
-6.9		4.4						1.29			2.18		47		
* 3%	4 bu.	3 bu.	4 bu.	2 bu.	$20	$10	$10	.50	$1	$1	.20	.20	50	5%	$3

*Each space between lines represents the amount indicated at bottom of each column.

(Higher values are recorded above the center of the page and lower values below, except for expenses, which are recorded in the opposite direction.)

Value of improved land. Net earnings increased from $2.00 to $3.00 an acre with each $10 increase in the value of improved land (Table 2). Larger earnings on the higher valued land were associated with more tillable land in corn and soybeans and with higher yields.

TABLE 2.--USE OF TILLABLE LAND AND OTHER FACTORS RELATED TO THE VALUE OF IMPROVED LAND
Accounting Farms in Farming-Type Area 7, 1944

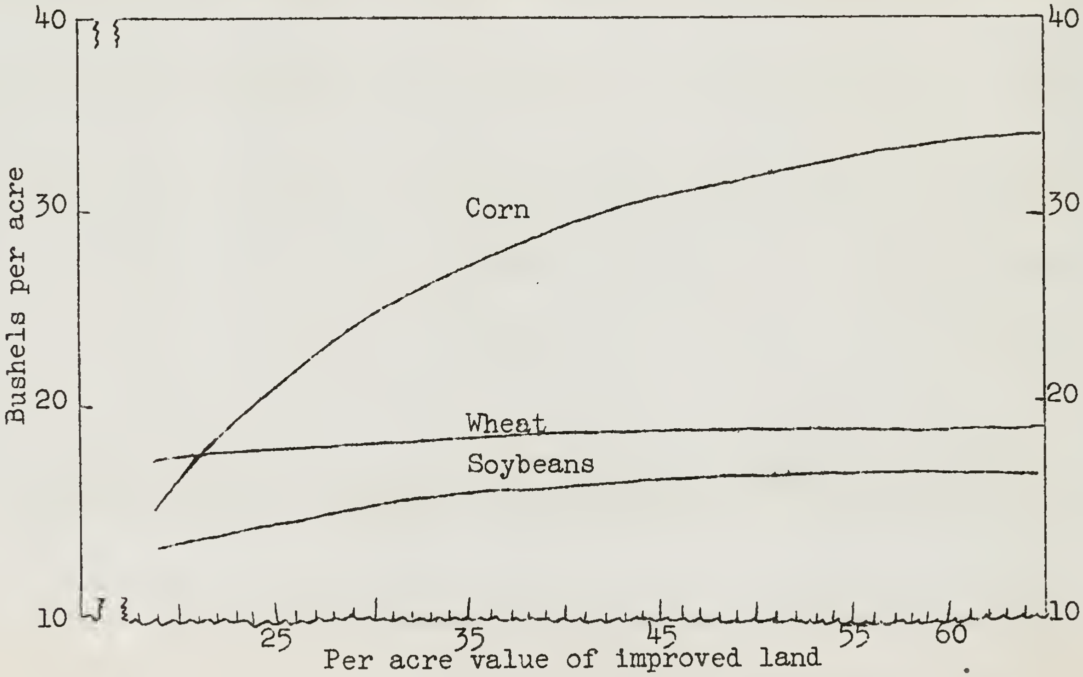
	Value of improved land			
Item	$15 to $25.99	$26.00 to $35.99	$36.00 to $45.99	$46.00 to $100
Number of farms	32	44	26	20
Average value of improved land	$21	$32	$41	$59
Percent of land area tillable	83.8	87.3	87.6	81.7
Percent of tillable land in:				
Corn	17.6	18.4	25.6	40.7
Oats	6.9	7.7	6.5	3.1
Wheat	12.6	12.9	13.2	6.5
Soybeans	8.1	7.7	11.2	11.7
Other crops	9.3	7.5	7.0	5.3
Legume hay and pasture	17.8	21.2	18.1	14.7
Non-legume hay and pasture	27.7	24.6	18.4	18.0
Total hay and pasture[1]	45.5	45.8	36.5	32.7
Net earnings per acre	$ 2.71	$ 4.27	$ 7.41	$10.07

[1] Includes clover and grass seed crops.

Crop yields. Corn yields were related to value of improved land; the relationship between yield and value was less for soybeans and very slight for wheat (Figure 2).

As the value of improved land increased from $20 to $30 an acre, the corn yield increased about one bushel an acre for each $1.00 increase in value, however, this increase became less as value increased. Increases of $1.00 an acre for improved land over $40 showed an increase in corn yields of only about one-fifth bushel an acre.

FIGURE 2.--RELATIONSHIP BETWEEN CROP YIELDS AND VALUE OF IMPROVED LAND



Source of income. The 20 farmers with over 40 percent of their income from grain had a 50 percent greater return for every dollar invested than any of the groups of livestock farmers. The hog farmers fed the most feed per acre and had fairly high earnings per dollar invested, even though they received the lowest return of any of the groups per $100 feed fed.

TABLE 3.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 7, 1944

	Source of income				
Item	Grain 40-63.4%	Dairy sales 40-59.5%	Hogs 40-88.2%	L.S. 29.9-59.9%	L.S. 60-98.1%
Number of farms	20	12	29	13	48
Acres in farm	364	259	348	271	255
Rate earned on investment	13.6%	5.3%	8.0%	7.9%	6.2%
Feed fed per acre	$ 6.53	$ 11.95	$ 16.52	$ 6.19	$ 11.63
Livestock returns					
Per $100 feed fed	$133	$139	$122	$146	$138
Hog returns per litter	155	215	232	154	230
Dairy returns per cow milked	89	174	97	86	127
Number of litters	10	3	23	8	7
Number of hens	173	170	157	172	212
Number of cows milked	7	15	5	6	7

Size of farm. The 30 farmers in the 221- to 300.9-acre group used four months more labor than the 11 farmers with less than 140.9 acres and received $1,209 more for their labor and management; their farms were also over twice as large (Table 4).

TABLE 4.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 7, 1944

	Total acres in farm			
Item	80 to 140.9	141 to 220.9	221 to 300.9	301 to 1241
Number of farms	11	34	30	47
Acres in farm	116	187	255	446
Rate earned on investment	2.6%	4.8%	10.7%	8.6%
Labor and management earnings	$687	$866	$1896	$2005
Net earnings per acre	2.25	3.46	7.12	5.59
Building cost per acre	1.03	.52	.63	.63
Total months of labor	15.2	16.1	19.2	25.2

Labor, horse and machinery costs per crop acre. Increasing amounts of livestock on farms require larger expenses for labor and for horses and machinery; farmers reduced their labor and horse and machinery costs per crop acre by operating more acres (Table 5).

TABLE 5.--LABOR COST AND HORSE AND MACHINERY COST PER CROP ACRE FOR FARMS OF DIFFERENT SIZE AND DIFFERENT AMOUNTS OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK
Accounting Farms in Farming-Type Area 7, 1944

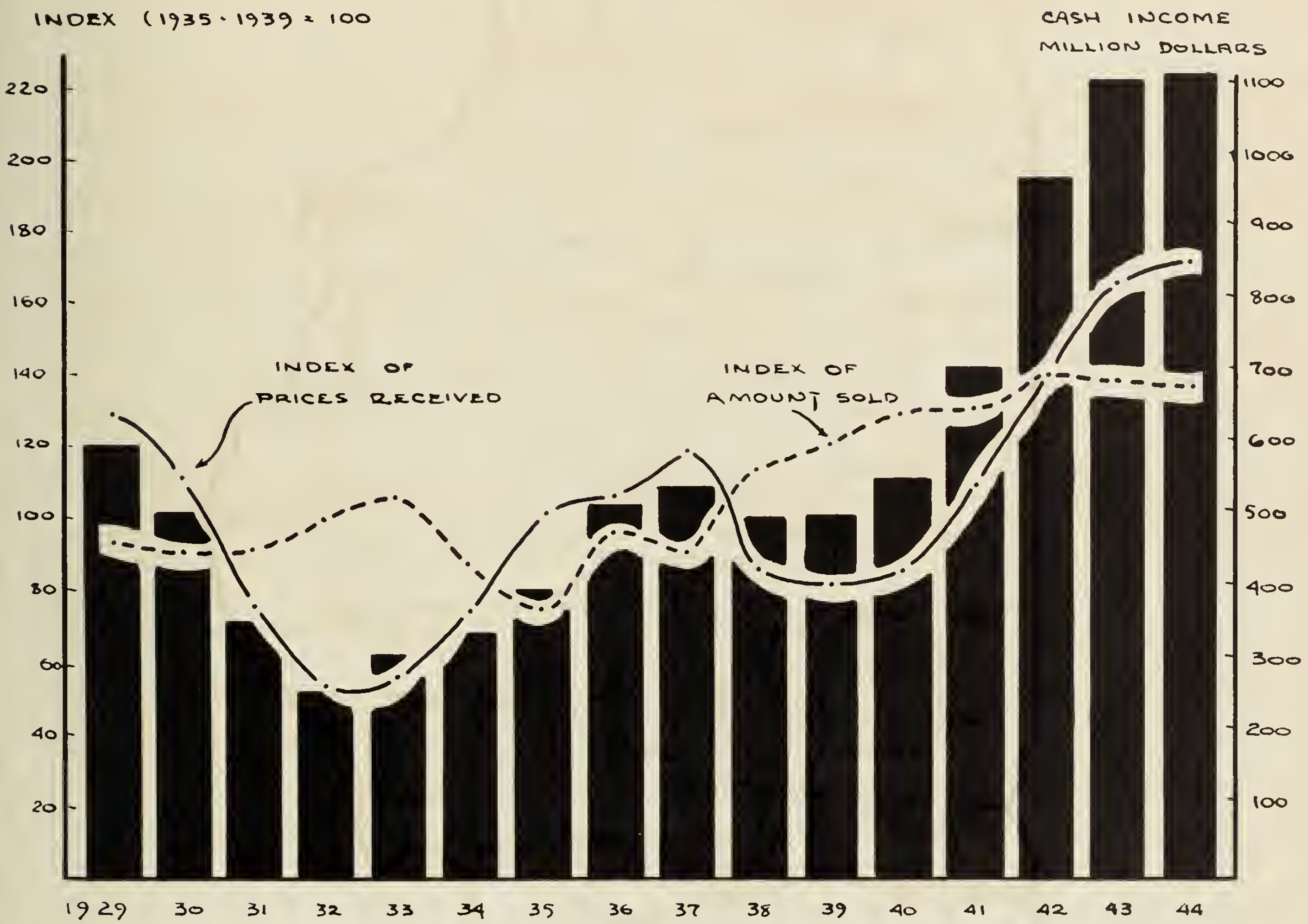
	Feed fed per acre				Feed fed per acre			
Acres per farm	$2.53 to $6.99	$7.00 to $11.99	$12.00 to $16.99	$17.00 to $43.47	$2.53 to $6.99	$7.00 to $11.99	$12.00 to $16.99	$17.00 to $43.47
	(labor cost per crop acre)				(horse and machinery cost per crop acre)			
80 to 141	$12.57	$13.93	$16.52	$17.59	$7.68	$8.72	$10.45	$11.44
141 to 220.9	10.79	10.92	11.42	13.34	6.54	6.80	9.47	10.03
221 to 300.9	7.51	9.46	10.89	11.98	5.18	6.15	8.72	8.95
301 to 1241	5.67	9.00	9.33	11.00	4.36	5.45	6.77	8.08

Earnings by tenure. Tenants (farmers who rented all their land) had larger labor and management earnings than either owners or part-owners (Table 6). The number of tenants was small as compared to either of the other groups, there being many more part owners due to the common practice of field renting in the area.

TABLE 6.--OPERATORS AND LANDLORDS EARNINGS BY TENURE
Accounting Farms in Farming-Type Area 7, 1944

	Owner		Part-owner		Tenant	
Item	80-221 acres	221-745 acres	106-221 acres	221-1241 acres	123-221 acres	221-796 acres
Number of farms	13	14	25	51	7	12
Acres, total	151	409	176	361	180	370
Acres, owned	141	409	115	192	--	--
Acres, rented	--	--	61	169	180	370
Operator's share						
Capital invested	$12830	$29809	$10606	$17837	$3269	$ 6122
Labor and management earnings	564	1069	547	1516	1232	1591
Rate earned on investment	4.4%	3.6%	5.2%	8.5%	--	--
Landlord's share						
Capital invested	--	--	$ 2180	$ 4932	$7864	$18427
Returns from capital and management	--	--	282	868	829	1592
Rate earned on investment	--	--	12.9%	17.6%	10.5%	8.6%

YOUR FARM BUSINESS REPORT 1944



CASH INCOME, PRICES, AND AMOUNT SOLD, ILLINOIS, 1929-44

Since 1929, cash income to Illinois farmers and prices received for products sold have followed the same general trends, dropping to a depression low in 1932 and rising to a wartime high in 1944. Amount of products sold has varied far less than prices received but has been on a high level since 1938.

FARMING-TYPE AREA EIGHT

Wabash Valley Grain and Livestock Area

NAME____

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

AE-2319

UNIVERSITY *of* ILLINOIS
COLLEGE *of* AGRICULTURE
AGRICULTURAL EXPERIMENT STATION
URBANA, ILLINOIS

DEPARTMENT *of*
AGRICULTURAL ECONOMICS

June 1, 1945

Dear Cooperator:

This is an analysis of your farm business as shown in the 1944 Farm Account Book which you kept in cooperation with this department. Because we are also short-handed, we have made this report shorter than in past years. We hope you will find it valuable.

The figures for your farm are shown on page 2 ~~4~~. Various factors for your farm are compared with figures from similar farms in your area. For example, where size of farm is important in affecting a particular factor, your farm is compared with an average for farms of similar size in your part of the state.

On page 3 ~~5~~ various measures of your farm business are shown on a thermometer chart like those used in past years. How favorably your farm compares in different items with other similar farms is shown by the height of the marks on the different columns.

The next three pages are filled with tables and charts showing how the standards used on pages three and four were worked out.

On the inside and outside of the back cover J. B. Cunningham tells how you may use your farm accounts in planning your farm business. As we shift over from wartime farming to peacetime farming within the next two or three years, we will all need to plan carefully. Good records for your business if properly studied will aid you in doing this.

An effort was made to keep this report simple. Additional facts and figures, if needed, may be found in your 1944 farm account book or in the state summary which will appear in an early issue of Illinois Farm Economics.

Over the years we have found farm accounts valuable in helping us to understand what factors make for financial success in farming. Your careful work in keeping the accounts has made this possible.

We thank you for your continued cooperation and hope you will find this report and your account valuable.

Very truly yours,

L. J. NORTON
Acting Head of Department

Annual Farm Business Report

SEVENTY-FIVE FARMS IN FARMING-TYPE ARE 8, 1944

J. B. Cunningham, Elmer Searls, and J. E. Wills[1]

Net farm earnings in Farming-Type Area 8 were lower in 1944 than for any other year since 1941. Seventy-five farms from this grain and livestock farming area averaged $1,903 for operator's labor and management in 1944, whereas those for 1943 averaged $3,029, the wartime high.

From the tables in this report, each cooperator may determine why his return for 1944 was above or below the average of other farms in the area. Whenever the factor is affected by size, source of income, value of improved land, amount of feed fed, and tenure, the records are sorted into groups and averages are run for each group. This practice permits you to compare your farm with others that are more similar to yours than is the entire group.

Yields of corn, wheat and oats are directly related to the quality of land; hence the average yield for these crops on farms having the same value of improved land as yours is taken as standard for your farm. This relationship is shown in Figure 2.

The returns per $100 worth of feed fed, amount of feed fed, hog returns per litter, and dairy returns per cow milked are affected by the kind and amount of livestock. If you received over 40 percent of your 1944 income from hogs, the standard return per $100 worth of feed fed for your farm is $137, the average of 34 farms with 40 percent or more of their income from hogs (Table 3).

If you operated a 160-acre farm and fed $15 worth of feed per acre in 1944, your labor cost per crop acre should have been below $12.11 in order to indicate more efficient use of labor than the average of similar farms (Table 5).

Comparisons between farms of different sizes and those with different types of tenure are shown in Tables 4 and 6, respectively.

The number of records from the different counties included in this report are shown in Figure 1.

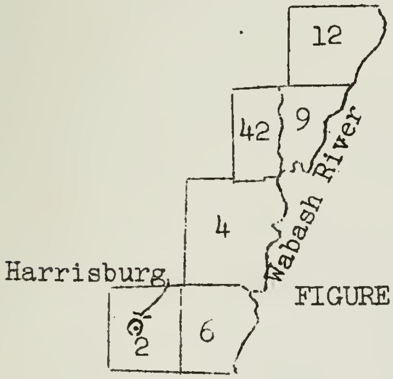


FIGURE 1.--FARMING-TYPE AREA 8

Farm advisers who assisted with this project were: Edwards, J. L. Diamond; Gallatin, A. L. Oxford; Lawrence, H. C. Wheller; Saline, A. C. Kamm; Wabash, H. M. Lett; White, Thurman Wright.

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[1] O. B. Brown supervised the closing of the accounts and the preparation of the tables used in this report. F. A. Stewart was fieldman in Edwards and Gallatin Counties.

TABLE 1.--FACTORS USED TO ANALYZE THE FARM BUSINESS
Accounting Farms in Farming-Type Area 8, 1944

Item	Your farm	Average of similar farms
Factors used on efficiency charts, opposite page		
Rate earned on investment	%	9.9 % a/
Factors that affect the gross income		
Crop yields		
Corn, bu		b/
Oats, bu		
Wheat, bu		
Soybeans, bu		14.5 a/
Livestock factors		
Returns per $100 worth of feed fed	$	$ d/
Hog returns per litter farrowed (No. litters_____)		
Dairy returns per cow milked (No. cows_____)		
Poultry returns per hen (No. hens_____)		3.58 a/
Factors that affect expenses		
Labor cost per crop acre	$	$ e/
Horse and machinery cost per crop acre		
Land improvement cost per acre		1.26 a/
Building cost per acre		c/
Organization of farm		
Acres in farm		242 a/
Percent of tillable land in hay and pasture	%	% b/
Feed fed per acre to productive livestock	$	$ d/
Other factors not used on efficiency chart		
Cash balance	$	$3344 a/
Total inventory change		-398
Net earnings per acre		b/
Labor and management earnings		c/
Value of land per acre		44 a/
Percent of land area tillable		b/
Number of pigs weaned per litter		6.9 a/
Total months of labor (months hired_____)		c/
Tenant's and landlord's earnings on completely rented farms		
Tenant's labor and management earnings	$	$ f/
Landlord's returns for capital and management		

a/ Average of all 75 accounting farms.
b/ Average of farms with similar value for improved land, Table 2 or Figure 2.
c/ Average of farms of similar size, Table 4.
d/ Average of farms with similar source of income, Table 3.
e/ Average of farms of similar size and with similar amount of feed fed, Table 5.
f/ Average of farms of similar size and tenure, Table 6.

USE THIS CHART TO STUDY YOUR BUSINESS
Accounting Farms in Farming-Type Area 8, 1944

The double line across the middle of the page represents the average for farms which are similar to your farm for the indicated factor. By drawing a line across each column at the place where your farm stands in that factor, you can compare your efficiency with that of other similar accounting farms in your area.

	Factors that affect gross earnings								Factors that affect expenses				Organization of farm		
	Crop yields				Livestock										
Rate earned on investment, percent	Corn, bu.	Oats, bu.	Wheat, bu.	Soybeans, bu.	Returns per $100 feed fed	Hog returns per litter farrowed	Dairy returns per cow milked	Poultry returns per hen	Labor cost per crop acre	Horse and machinery cost per crop acre	Land improvement cost per acre	Building cost per acre	Acres in farm	Percent of tillable land in hay and pas.	Feed fed per acre to prod. livestock
24.9				24.5				5.58			.26		442		
21.9				22.5				5.18			.46		402		
18.9				20.5				4.78			.66		362		
15.9				18.5				4.38			.86		322		
12.9				16.5				3.98			1.06		282		
9.9				14.5				3.58			1.26		242		
6.9				12.5				3.18			1.46		202		
3.9				10.5				2.78			1.66		162		
.9				8.5				2.38			1.86		122		
-2.1				6.5				1.98			2.06		82		
-5.1				4.5				1.58			2.26		42		
* 3%	4 bu.	4 bu.	2 bu.	2 bu.	$15	$10	$10	$.40	$1	$1	.20	.20	40	3%	$2

*Each space between lines represent the value indicated at bottom of each column.

(Higher values are recorded above the center of the page and lower values below, except for expenses which are recorded in the opposite order.)

Value of improved land. Net earnings increased from $1.32 to $4.28 an acre with each $15 increase in the value of improved land (Table 2). Larger earnings on the higher valued land were associated with more tillable land in corn and with higher crop yields.

TABLE 2.--VALUE OF IMPROVED LAND RELATED TO USE OF TILLABLE LAND AND OTHER FACTORS
Accounting Farms in Farming-Type Area 8, 1944

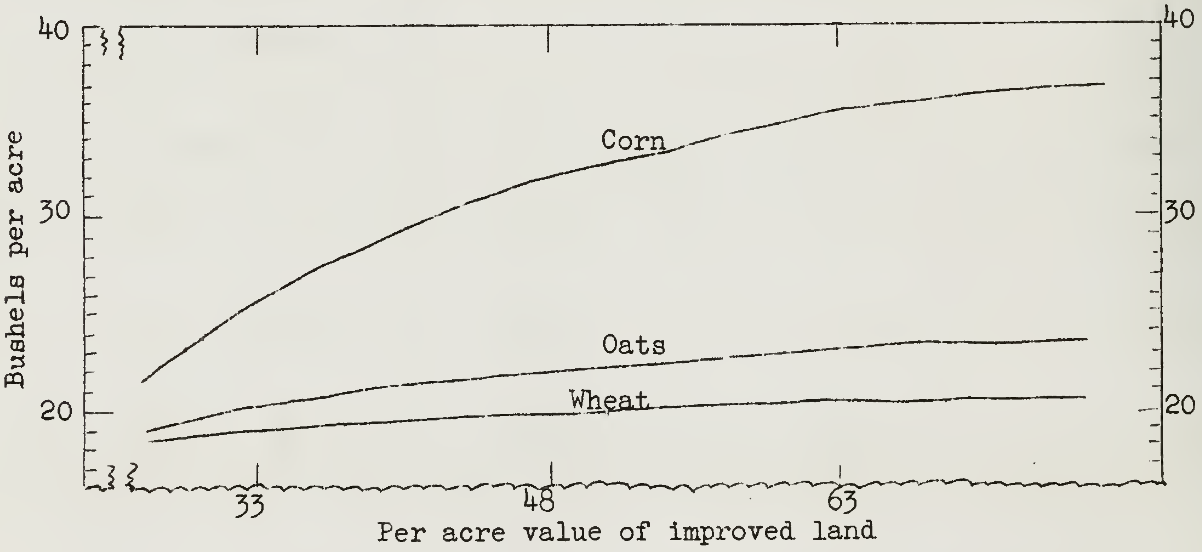
	Value of improved land			
Item	$20 to $33	$33 to $47.99	$48 to $62.99	$63 to $100
Number of farms	14	33	13	15
Average value of improved land	$28	$39	$53	$74
Percent of land area tillable	83.8%	82.2%	89.5%	88.2%
Percent of tillable land in:				
Corn	24.3	27.4	32.3	32.3
Oats	4.4	5.0	2.3	5.3
Wheat	18.8	17.4	18.8	20.6
Soybeans	3.3	8.8	5.3	7.2
Other crops	13.7	7.1	9.7	9.7
Legume hay and pasture	16.9	20.6	15.8	13.8
Non-legume hay and pasture	18.6	13.7	15.8	11.1
Total hay and pasture[1]	35.5	34.3	31.6	24.9
Net earnings per acre	$ 4.20	$ 7.02	$11.30	$12.62

[1] Includes clover and grass seed crops.

Crop yields. Corn yields were related to value of improved land; the relationship between yield and value was less for oats and very slight for wheat (Figure 2).

As the value of improved land increased from $33 to $48 an acre, the corn yield increased about four-tenths bushel per acre for each $1.00 increase in value; however, this increase became less as value increased. Increases of $1.00 an acre for improved land over $63 showed an increase in corn yields of only about two-tenths bushel per acre.

FIGURE 2.--RELATIONSHIP BETWEEN CROP YIELDS AND VALUE OF IMPROVED LAND



Source of income. The 16 farms with their major income from grain were larger than either of the other two groups of farms and had a much larger rate earned on investment than the general farms but only slightly larger than the hog farms (Table 3).

TABLE 3.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 8, 1944

Item	Source of income		
	Grain 35%+	Hogs 40%+	General farms
Number of farms	16	34	25
Acres in farm	317	241	198
Rate earned on investment	10.8%	10.4%	8.1%
Feed fed per acre	$ 9.25	$ 16.92	$ 13.79
Livestock returns			
Per $100 feed fed	$115	$137	$136
Hog returns per litter	150	249	237
Dairy returns per cow	105	139	132
Number of litters	12	15	6
Number of hens	175	196	205
Number of cows milked	5	6	9

Size of farm. The 24 farmers in the 141- to 220.9-acre group used 1.4 months more labor than the 14 farmers with less than 140.9 acres and received $884 more for their labor and management; their farms also returned 5.3 percent more on invested capital (Table 4).

TABLE 4.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 8, 1944

Item	Total acres in farm			
	80 to 140.9	141 to 220.9	221 to 300.9	301 to 924
Number of farms	14	24	16	21
Acres in farm	117	178	248	397
Rate earned on investment	6.1%	11.4%	7.3%	11.2%
Labor and management earnings	$1041	$1925	$1261	$2942
Net earnings per acre	6.49	9.88	5.69	9.26
Building cost per acre	.94	.70	.66	.60
Total months of labor	16.1	17.5	18.4	26.2

Labor, horse and machinery costs per crop acre. Increasing amounts of livestock on farms require larger expenses for labor and for horses and machinery; farmers reduced their labor and horse and machinery costs per crop acre by operating more acres (Table 5).

TABLE 5.--LABOR COST AND HORSE AND MACHINERY COST PER CROP ACRE FOR DIFFERENT SIZE FARMS AND DIFFERENT AMOUNTS OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK
Accounting Farms in Farming-Type Area 8, 1944

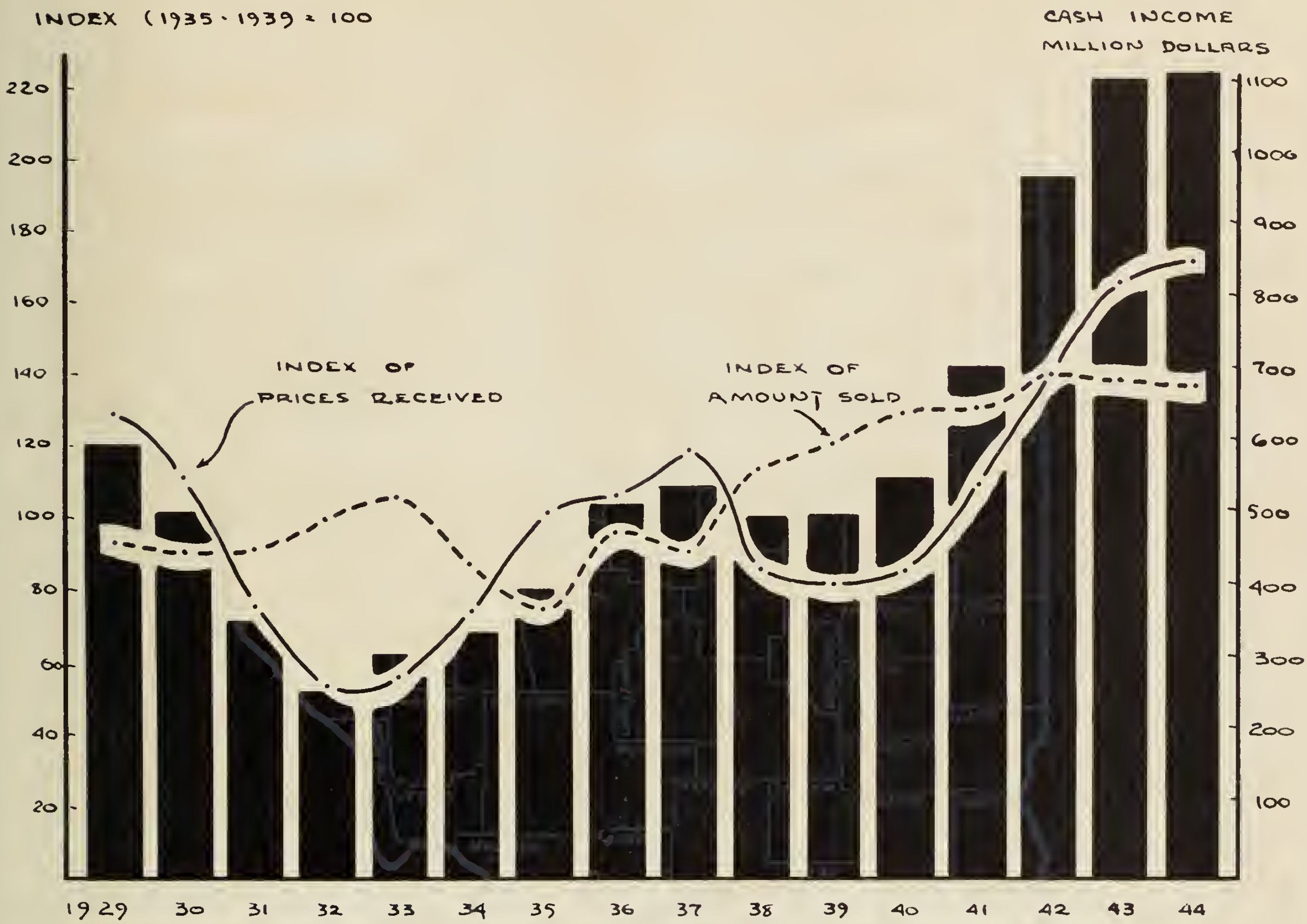
	Feed fed per acre			Feed fed per acre		
Acres per farm	Less than $12.00	$12.00 to $17.99	$18.00 or more	Less than $12.00	$12.00 to $17.99	$18.00 or more
	(labor cost per crop acre)			(horse and machinery cost per crop acre)		
Less than 141	$12.55	$15.61	$16.37	$8.65	$9.61	$10.36
141 to 220.9	11.17	12.11	13.27	7.23	7.64	8.98
221 to 300.9	10.21	10.60	11.80	6.69	7.34	8.34
301 or more	7.73	8.91	9.60	5.63	6.76	7.07

Earnings by tenure. Part-owners operated larger farms than owners or tenants (Table 6). Landlords of part-owner farms had twice the return per dollar invested as landowners of the other two groups. Their higher earnings are due partially to the fact that much of their land was field-rented, and such land did not bear any of the landlord's expense for buildings.

TABLE 6.--OPERATOR'S AND LANDLORD'S EARNINGS BY TENURE
Accounting Farms in Farming-Type Area 8, 1944

	Owner		Part-owner		Tenant	
Item	80-221 acres	221-425 acres	129-221 acres	221-924 acres	120-221 acres	221-352 acres
Number of farms	17	7	14	23	7	7
Acres, total	146	294	170	356	147	292
Acres, owned	146	294	81	173	--	--
Acres, rented	--	--	89	183	147	292
Operator's share						
Capital invested	$14831	$24095	$9600	$20375	$3489	$ 6136
Labor and management earnings	1467	1354	1262	1757	1062	1311
Rate earned on investment	8.7%	7.6%	8.6%	9.3%	--	--
Landlord's share						
Capital invested	--	--	$4678	$ 8102	$9469	$18643
Return for capital and management	--	--	828	1303	819	1250
Rate earned on investment	--	--	17.7%	16.1%	8.7%	6.7%

YOUR FARM BUSINESS REPORT 1944



CASH INCOME, PRICES, AND AMOUNT SOLD, ILLINOIS, 1929-44

Since 1929, cash income to Illinois farmers and prices received for products sold have followed the same general trends, dropping to a depression low in 1932 and rising to a wartime high in 1944. Amount of products sold has varied far less than prices received but has been on a high level since 1938.

FARMING-TYPE AREA NINE

Southern Fruit and Vegetable Area

NAME____

DEPARTMENT OF AGRICULTURAL ECONOMICS, UNIVERSITY OF ILLINOIS
COLLEGE OF AGRICULTURE, EXTENSION SERVICE IN AGRICULTURE AND HOME ECONOMICS
URBANA, ILLINOIS

AE-2320

UNIVERSITY *of* ILLINOIS
COLLEGE *of* AGRICULTURE
AGRICULTURAL EXPERIMENT STATION
URBANA, ILLINOIS

DEPARTMENT *of*
AGRICULTURAL ECONOMICS

June 1, 1945

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We thank you for your continued cooperation and hope you will find this report and your account valuable.

Very truly yours,

L. J. NORTON
Acting Head of Department

Annual Farm Business Report

THIRTY-FIVE FARMS IN FARMING-TYPE AREA 9, 1944[1]

J. B. Cunningham, Elmer N. Searls, and J. E. Wills[2]

Net farm earnings in Farming-Type Area 9 were lower in 1944 than for any other year since 1941. Thirty-five farms from this fruit and vegetable farming area averaged $1,145 for labor and management in 1944, whereas such earnings in 1943 averaged $1,921, the wartime high.

From the tables in this report, each cooperator may determine why his return for 1944 was above or below the average of other farms in the area. Whenever the factor is affected by size, source of income, value of improved land, amount of feed fed, and tenure, the records are sorted into groups and averages are run for each group. This practice permits you to compare your farm with others that are more similar to yours than is the entire group.

Yields of corn, oats, and wheat are directly related to the quality of land; hence the average yield for the crops on farms having the same value of improved land as yours is taken as standard for your farm. This relationship is shown in Figure 2.

The returns per $100 worth of feed fed, amount of feed fed, hog returns per litter, and dairy returns per cow milked are affected by the kind and amount of livestock. If you received over 70 percent of your 1944 income from productive livestock, the standard return per $100 worth of feed fed for your farm is $146, the average of 16 farms with 70 percent or more of their income from livestock (Table 3).

If you operated a 160-acre farm and fed $15 worth of feed per acre in 1944, your labor cost per crop acre should have been below $15.96 in order to indicate more efficient use of labor than the average of similar farms (Table 5).

Comparisons between farms of different sizes and those with different types of tenure are shown in Tables 4 and 6, respectively.

The number of records from the different counties included in this report are shown in Figure 1.

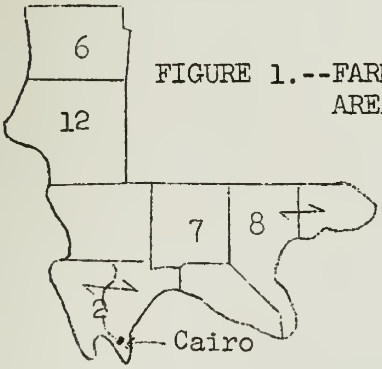

FIGURE 1.--FARMING-TYPE AREA 9

Farm advisers who assisted with this project were:

Jackson-Perry, J. G. McCall; Johnson, Harold H. Gordon, adviser at large; Pope-Hardin, G. C. Smith; Pulaski-Alexander, L. L. Davis (L. B. Broom since March 16, 1944).

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[1] Also includes Perry County, which is in Farming-Type Area 8 because Jackson and Perry Counties have one farm adviser.

[2] O. B. Brown supervised the closing of the accounts and the preparation of the tables used in this report. F. A. Stewart was fieldman for the accounting project in Pope-Hardin and Johnson Counties.

TABLE 1.--FACTORS USED TO ANALYZE THE FARM BUSINESS

Accounting Farms in Farming-Type Area 9, 1944

Item	Your farm	Average of similar farms
Factors used on efficiency charts, opposite page		
Rate earned on investment..............................	______%	7.5 % a/
Factors that affect the gross income		
Crop yields		
Corn, bu...................................	______	______ b/
Oats, bu...................................	______	______
Wheat, bu..................................	______	______
Soybeans, bu...............................	______	13.2 a/
Livestock factors		
Returns per $100 worth of feed fed..................	$______	$______ d/
Hog returns per litter farrowed (No. litters_____)..	______	______
Dairy returns per cow milked (No. cows_____).......	______	______
Poultry returns per hen (No. hens_____).............	______	3.82 a/
Factors that affect expenses		
Labor cost per crop acre................................	$______	$______ e/
Horse and machinery cost per crop acre.............	______	______
Land improvement cost per acre........................	______	.70 a/
Building cost per acre..................................	______	______ c/
Organization of farm		
Acres in farm..	______	257 a/
Percent of tillable land in hay and pasture...........	______%	______% b/
Feed fed per acre to productive livestock............	$______	$______ d/
Other factors not used on efficiency chart		
Cash balance..	$______	$1 635 a/
Total inventory change..............................	______	192
Net earnings per acre...............................	______	______ b/
Labor and management earnings.....................	______	______ c/
Value of land per acre...............................	______	27 a/
Percent of land area tillable........................	______	______ b/
Percent of tillable land in______and______..........	______	______
Number of pigs weaned per litter....................	______	6.1 a/
Total months of labor (months hired_____)...........	$______	$______ c/
Tenant's and landlord's earnings on completely rented farms		
Tenant's labor and management earnings...............	$______	$______ f/
Landlord's returns for capital and management.........	______	______

a/ Average of all 35 accounting farms.
b/ Average of farms with similar value for improved land, Table 2 or Figure 2.
c/ Average of farms of similar size, Table 4.
d/ Average of farms with similar source of income, Table 3.
e/ Average of farms of similar size and with similar amount of feed fed, Table 5.
f/ Average of farms of similar tenure, Table 6.

USE THIS CHART TO STUDY YOUR BUSINESS
Accounting Farms in Farming-Type Area 9, 1944

The double line across the middle of the page represents the average for farms which are similar to your farm for the indicated factor. By drawing a line across each column at the place where your farm stands in that factor, you can compare your efficiency with that of other similar accounting farms in your area.

	Factors that affect gross earnings								Factors that affect expenses				Organization of farm		
	Crop yields				Livestock										
Rate earned on investment, percent	Corn, bu.	Oats, bu.	Wheat, bu.	Soybeans, bu.	Returns per $100 feed fed	Hog returns per litter farrowed	Dairy returns per cow milked	Poultry returns per hen	Labor cost per crop acre	Horse and machinery cost per crop acre	Land improvement cost per acre	Building cost per acre	Acres in farm	Percent of tillable land in hay and pas.	Feed fed per acre to prod. livestock
22.5				28				5.32			--		407		
19.5				25				5.02			--		377		
16.5				22				4.72			.10		347		
13.5				19				4.42			.30		317		
10.5				16				4.12			.50		287		
7.5				13				3.82			.70		257		
4.5				10				3.52			.90		227		
1.5				7				3.22			1.10		197		
-1.5				4				2.92			1.30		167		
-4.5				1				2.62			1.50		137		
-7.5				--				2.32			1.70		107		
* 3%	3 bu.	3 bu.	2 bu.	3 bu.	$15	$10	$10	.30	$2	$1	.20	.20	30	2%	$2

*Each space between lines represent the value indicated at bottom of each column.

(Higher values are recorded above the center of the page and lower values below, except for expenses which are recorded in the opposite order.)

Value of improved land. Net earnings increased from $.64 to $3.15 an acre with each $9 increase in the value of improved land (Table 2). Larger earnings on the higher valued land were associated with more tillable land in corn and with higher crop yields.

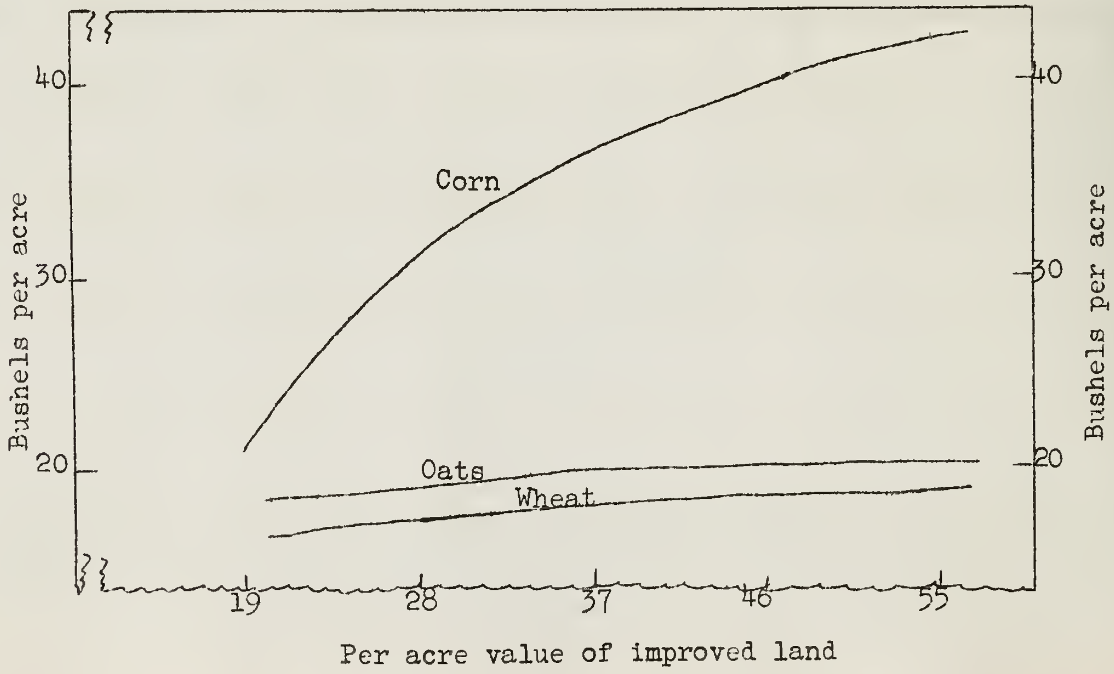
TABLE 2.--USE OF TILLABLE LAND AND OTHER FACTORS RELATED TO THE VALUE OF IMPROVED LAND
Accounting Farms in Farming-Type Area 9, 1944

Item	Value of improved land		
	Less than $28	$28 to $36.99	$37 or more
Number of farms	11	14	10
Average value of improved land	$21	$32	$53
Percent of land area tillable	74.7	69.5	65.9
Percent of tillable land in:			
Corn	19.8	21.0	29.7
Oats	2.1	6.8	3.7
Wheat	8.7	16.6	9.5
Soybeans	2.2	5.5	5.0
Other crops	5.7	10.5	12.2
Legume hay and pasture	38.0	25.0	25.4
Non-legume hay and pasture	23.5	14.6	14.5
Total hay and pasture[1]	61.5	39.6	39.9
Net earnings per acre	$ 2.26	$ 5.41	$ 6.05

[1] Includes clover and grass seed crops.

Crop yields. Corn yields were related to value of improved land; the relationship between yield and value was less for oats and wheat (Figure 2). As the value of improved land increased from $19 to $28 an acre, the corn yield increased a little over one bushel an acre for each $1.00 increase in value; however, this increase became less as value increased. Increases of $1.00 an acre for improved land over $37 showed an increase in corn yields of only about one-half bushel an acre.

FIGURE 2.--RELATIONSHIP BETWEEN CROP YIELDS AND VALUE OF IMPROVED LAND



Source of income. The 19 farmers with under 70 percent of their income from livestock fed about one-half (58.1%) as much feed as the 16 with over 70 percent of their income from livestock but they had a $6.00 larger return for every $100 worth of feed fed (Table 3).

TABLE 3.--SOURCE OF INCOME RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 9, 1944

Item	General farms	
	L.S. 70%-	L.S. 70%+
Number of farms................	19	16
Acres in farm..................	280	228
Rate earned on investment......	7.8%	7.1%
Feed fed per acre..............	$ 5.58	$ 11.71
Livestock returns		
Per $100 feed fed............	$152	$146
Hog returns per litter.......	215	208
Dairy returns per cow........	140	136
Number of litters..............	5	8
Number of hens.................	130	205
Number of cows milked..........	7	8

Size of farm. The 16 farmers with less than 221 acres used 7.2 months less labor than the 19 farmers with over 221 acres and received $345 more for their labor and management (Table 4).

TABLE 4.--SIZE OF FARM RELATED TO FARM EARNINGS AND OTHER FACTORS
Accounting Farms in Farming-Type Area 9, 1944

Item	Total acres in farm	
	Less than 221	221 or more
Number of farms.................	16	19
Acres in farm...................	146	350
Rate earned on investment.......	10.5%	6.2%
Labor and management earnings...	$1 332	$987
Net earnings per acre...........	6.89	3.43
Building cost per acre..........	.77	.65
Total months of labor...........	15.1	22.3

Labor, horse and machinery costs per crop acre. Increasing amounts of livestock on farms require larger expenses for labor and for horses and machinery; farmers reduced their labor and horse and machinery costs per crop acre by operating more acres (Table 5).

TABLE 5.--LABOR COST AND HORSE AND MACHINERY COST PER CROP ACRE FOR FARMS OF DIFFERENT SIZE AND WITH DIFFERENT AMOUNTS OF FEED FED PER ACRE TO PRODUCTIVE LIVESTOCK
Accounting Farms in Farming-Type Area 9, 1944

Acres per farm	Feed fed per acre: Less than $8.00	Feed fed per acre: $8.00 or more	Feed fed per acre: Less than $8.00	Feed fed per acre: $8.00 or more
	(labor cost per crop acre)		(horse and machinery cost per crop acre)	
Less than 221....	$14.18	$15.96	$9.50	$10.77
221 or more......	11.75	13.97	8.06	9.78

Earnings by tenure. Tenants (farmers who rented all their land) had larger labor and management earnings than either owners or part-owners (Table 6). The number of tenants was small compared to either of the other groups. Landowners of the part-owner group had the highest return on the money invested because of the common practice of field-renting crop land which does not carry overhead expenses for such items as idle land and buildings.

TABLE 6.--TENANTS AND LANDLORD'S EARNINGS ON RENTED FARMS
Accounting Farms in Farming-Type Area 9, 1944

Item	Owner	Part-owner	Tenant
Number of farms......................	17	13	5
Acres, total.........................	243	275	255
Acres, owned.........................	243	201	--
Acres, rented........................	--	74	255
Operator's share			
Capital invested..................	$14 992	$11 185	$ 8 811
Labor and management earnings.....	1 064	754	1 674
Rate earned on investment.........	7.4%	4.5%	--
Landlord's share			
Capital invested..................	--	$ 1 787	$10 559
Return for capital and management.	--	283	788
Rate earned on investment.........	--	15.9%	7.5%

AS WE LOOK TO THE FUTURE

"Now what do you recommend?" This is a common question when reports are returned. We urge you to use all the information in your 1944 and previous reports, as well as outlook and other available information, to plan your business for the final stages of the war and readjustments to postwar conditions.

Studies of farm records over a period of years indicate that the following are important in causing variations in earnings:

1. Volume of business — some of the best measures are number of months of productive work that the farm provides, tillable acres, numbers of livestock, and total gross sales.
2. Balanced business—rotations to utilize different grades of land, livestock to utilize roughages and other home-grown feeds, distribution of labor throughout the year, machinery fitted to needs of farm, etc.
3. Production rates — crop yields, pigs per litter, eggs per hen, etc.
4. Efficiency, skill, and timeliness with which the work is done.

If you lack volume of business you should consider expanding enterprises in which you consistently excel as indicated by your records over a period of years. On the basis of such study, a cooperator developed one of the most profitable hog enterprises in the state; another built up an outstanding poultry flock; many others have improved their specialties such as sheep, dairy, field crops, canning crops, etc. Expansion should be on the basis of profitableness rather than on the basis of a hobby. In general, the build-up should be gradual.

While you study your reports and compare the thermometer charts — one with another over a period of years — you may find that you have been consistently low in certain factors. The remedy is either: (1) Improve your skill and knowledge in such factors, or (2) reduce the activity to the point where there will be little, if any, loss. Usually success depends on careful planning, then thoroughness in carrying out a large number of controllable practices. You may learn about the practices by visiting farms where the records show profitable operation and by attending extension meetings and demonstrations. Practices may be mastered by hard work and study.

YOUR POSTWAR PLAN

In setting up your postwar plan, you will find it helpful to consider the following:

1. Test and map the entire farm for limestone, phosphate, and potash deficiencies. Then apply the needed materials to both crop and pasture land as they become available and as labor will permit. In many counties, laboratories are set up to do the testing.
2. Redetermine the proper use of each part of your farm for cropland (including rotation hay and pasture), permanent pasture and woods. Then re-establish a cropping system that will maintain fertility and control erosion. Provide for 20 to 50 percent of your tillable land in deep-rooted legumes depending on your soil. Your ROTATION SHOULD ROTATE. You may check your past record by figuring out for each field the years that the field had good stands of clover or alfalfa over a 10-year period. Two years for each field is a minimum for the best land.
3. Proper water disposal and conservation including contour farming, establishing and maintaining grass waterways, terracing, and adequate tile and open ditch drainage are parts of the common problem of securing most efficient land use. Providing an abundant and safe water supply for livestock and home use is also important in farm planning.
4. Adjust your livestock program to any increased production of roughages and in accordance with your aptitude in handling livestock. Your records are a safe guide. What do the thermometer charts show for your livestock?
5. Your buildings may need to be remodeled or replaced when materials and labor become available. On many farms there are obsolete buildings such as horse barns which might easily be converted into machine sheds, feeding barns, or poultry houses. Our building needs are changing rapidly. You may be able to rearrange your farmstead for convenience and attractiveness.
6. Provide for the economical use of your machinery. The records show a wide variation in machinery cost for similar farms. Some cooperators have kept down their net costs by doing custom work. This activity may become less profitable when up-to-date

machinery becomes more plentiful. A good plan is to keep your machinery investments and expenses in balance with your farm business. Your records will show how your investments and costs compare with similar farms.

7. More labor may be available during the postwar period but it will probably not be plentiful. Some veterans will want to return to the farm. Suggestions for giving them a start may be found in Circuar 587, "Father-Son Farm Business Agreements."

8. Combine your enterprises to give balance to your business as a whole. Test out the plan, using the procedure which is outlined on pages 16 and 17 of the blue booklet "Planning the Farm Business."

FREQUENT ADJUSTMENTS NEEDED

After you have made your long-time plan for the postwar period you may wisely make minor adjustments from year to year in the light of changing conditions as indicated in the agricultural outlook. In addition, you may well supplement your long-time plan with day-to-day job planning.

Your records and your knowledge of your farm put you in an excellent position to DO YOUR OWN PLANNING. You may receive assistance in remaking and carrying out your farm plan from your farm adviser or from other specialists.

Cooperative Extension Work in Agriculture and Home Economics: University of Illinois, College of Agriculture, and the United States Department of Agriculture cooperating. H. P. Rusk, *Director*. Acts approved by Congress May 8 and June 30, 1914. (30235)

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